The business model of long-haul low-cost carriers – An analysis of future viability at the example of Norwegian Air Shuttle ASA and Eurowings GmbH

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Abstract

Title: The business model of long-haul low-cost carriers – An analysis of future viability at the example of Norwegian Air Shuttle ASA and Eurowings GmbH

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Over the last decades, low-cost carriers used to revolutionize short- and medium-haul markets globally. With the viability of their business model being proven through profitable operations, an increasing number of low-cost carriers entered the lucrative long-haul segment more recently. However, there is yet no prevalent view of the business model viability of long-haul low-cost carriers; recent events such as Wow Air's insolvency raised strong doubts. This thesis aims at examining the future viability of the long-haul low-cost carriers' business model by conducting an in-depth investigation of Norwegian Air Shuttle ASA's and Eurowings GmbH's long-haul business model. Subsequently, an innovated business model is developed. Key findings include that the business model of long-haul low-cost carriers is principally viable. However, the two selected airlines show that operating profitably remains difficult, regardless of the operating model and organizational structure. To ensure future viability, the business model needs to be innovated. In this context, a lean operating model is crucial to the success of long-haul low-cost carriers. Furthermore, new-generation, fuel-efficient narrow-body aircraft such as the Airbus A321 XLR may open up new potentials for profitable long-haul operations.

Keywords: airline industry; long-haul low-cost carrier; business model viability; new-generation aircraft; business model innovation

Resumo

Título: Modelo de negócio de companhias aéreas de baixos preços em rotas de longo curso – Uma análise da viabilidade com o exemplo da Norwegian Air Shuttle ASA e Eurowings GmbH

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Nas últimas décadas, as companhias aéreas de baixos preços revolucionaram os mercados de rotas de curta e longa distância a nível global. A viabilidade deste modelo de negócio foi confirmada pelas suas operações rentáveis, o que recentemente suscitou um aumento no número de companhias aéreas de baixos preços a apostar no lucrativo mercado das viagens de longo curso. No entanto, não há até ao momento provas consistentes quanto à viabilidade do modelo de negócio de companhias aéreas de preços baixos em rotas de longa distância; eventos recentes tal como a insolvência da Wow Air deram origem a fortes dúvidas. Esta tese pretende examinar a viabilidade do modelo de negócio de companhias aéreas de baixo custo em voos de longo curso, conduzindo a uma detalhada investigação da Norwegian Air Shuttle ASA e da Eurowings GmbH em rotas de longa distância. Posteriormente, um inovador modelo de negócio é desenvolvido. As conclusões principais incluem a revelação que o modelo de negócios das companhias aéreas de preços baixos em rotas de longo curso é maioritariamente viável. Contudo, as duas companhias aéreas selecionadas revelaram que atingir lucros ainda permanece difícil, independentemente do modelo operacional e da estrutura organizacional. Para assegurar a sua viabilidade, o modelo de negócio tem de ser inovado. Neste contexto, um modelo operacional simples é crucial para o sucesso de companhias aéreas de reduzido custo a operar em rotas de longa distância. Adicionalmente, aviões estreitos de nova-geração com gastos eficientes de combustível, como o Airbus A321 XLR poderão potenciar novas oportunidades de manter operações lucrativas em voos de longo curso.

Palavras-chave: indústria da aviação civil; companhia aérea de baixo preço em voos de longo curso; viabilidade do modelo de negócio; nova-geração de aviões; inovação do modelo de negócio

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III. List of abbreviations

Approx.	Approximately
BMC	Business Model Canvas
BMI	Business model innovation
LCC	Low-cost carrier

1 Introduction

1.1 Topic presentation

Legacy carriers such as Lufthansa and United Airlines once dominated the global passenger airline industry. The U.S. Airline Deregulation Act of 1978, followed by the European equivalent in the 1980s, sparked the development of the first low-cost carriers (LCCs) (Pels, 2008). In the last decades, these carriers revolutionized short- and medium-haul markets globally. With the viability of their business model being proven through profitable operations, an increasing number of LCCs such as Eurowings GmbH (hereinafter referred to as Eurowings) and Norwegian Air Shuttle ASA (hereinafter referred to as Norwegian) entered the long-haul segment more recently (Soyk et al., 2017). Yet, academic literature is indecisive about the future viability of the long-haul LCCs' business model (Soyk et al., 2017). Recent events, such as Wow Air's bankruptcy and Norwegian experiencing severe financial difficulties through its long-haul operations, raised strong doubts (Sigurdardottir, 2019; Goldstein, 2019). Hence, the question remains whether the LCCs' business model also works for long-haul operations.

1.2 Academic and managerial relevance

The field of LCCs' business model viability for long-haul operations is becoming a more frequently discussed topic in the passenger airline industry. While the subject finds increasing attention among scholars and practitioners, there is yet no prevalent view of the viability of long-haul LCCs. For instance, Francis et al. (2007) argue that the success of long-haul low-cost flights is questionable. Nevertheless, according to Flottau and Schofield (2019), long-haul low-cost operations are possible when a premium product, feeder service and freight transportation is provided.

However, exemplary events like the recent insolvency of the Icelandic long-haul LCC Wow Air (Sigurdardottir, 2019) emphasize the great need for long-haul low-cost airline managers to rethink their business model. Likewise, the aggressively growing long-haul low-cost competition exerts strong pressure on legacy carriers' traditional premium-priced long-haul offers, which forces managers of legacy airlines to constantly observe the development of long-haul LCCs (Soyk et al., 2017). Furthermore, previous studies like the one conducted by Morrell (2008), focused on an operational point of view through, for instance, examining market stimulation and feeder services. Hence, an investigation of additional determinants and the potential innovation of the long-haul LCCs' business model is necessary.

1.3 Problem statement definition

The thesis aims at examining the future viability of the long-haul LCCs' business model as part of a cross-case business model analysis of Norwegian and Eurowings. Then, based upon that, an innovated business model for long-haul LCCs will be developed.

1.4 Research questions

In order to approach this challenge, the following research questions shall guide the course of the investigation.

Research question 1: What are the characteristics of the long-haul low-cost passenger airline industry?

Research question 2: What are the strengths and flaws of Norwegian's and Eurowings' long-haul business model?

Research question 3: Considering the results discovered in research question one and two, does the long-haul LCCs' business model need to be innovated to ensure future viability and, if yes, in which way?

1.5 Thesis structure

The thesis is structured as follows: Chapter 2 presents a review on long-haul low-cost airlines, the business model concept, including the notion of business model viability and the Business Model Canvas (BMC) framework, as well as business model innovation (BMI). Chapter 3 is devoted to the cross-case analysis of Norwegian's and Eurowings' long-haul business model. At the beginning of this chapter, an overview of the long-haul low-cost passenger airline industry will be presented to provide a general understanding as well as recent developments of the industry. Afterwards, the underlying methodology and data collection approach will be described, followed by the presentation of the two selected airlines' long-haul business model as well as the subsequent comparison of their business models. In Chapter 4, both the results of the analysis will be presented and the viability of the long-haul LCCs' business model will be assessed and, based upon that, an innovated business model will be developed. Finally, Chapter 5 concludes with a summary of the findings, the presentation of limitations and the suggestion of avenues for future research.

2 Literature review

2.1 Long-haul low-cost carriers

With the rise of the first long-haul LCCs in the 2000s, scholars and practitioners started to examine the key characteristics of their business model. For instance, previous studies emphasize that long-haul LCCs use point-to-point networks, unlike legacy carriers that most commonly use hub-and-spoke networks (Soyk et al., 2017). Next, De Poret et al. (2015) address the unbundling of services, pointing out the no frills service as another distinctive feature. Also, previous studies mention that the target customer segments of long-haul LCCs consist of leisure travelers, business travelers that are sensitive to price, as well as travelers visiting family and friends. Besides, unlike legacy carriers that usually offer daily frequencies on long-haul routes, long-haul LCCs offer considerably less frequencies per week (Soyk et al., 2017).

More recent insolvencies of long-haul LCCs such as Zoom Airlines that date back to the late 2000s then casted doubt on and initiated evaluations about the viability of their business model (Blondel et al., 2017). However, academic literature is indecisive about the business model viability of long-haul LCCs. In this regard, cost advantages of long-haul LCCs over legacy carriers have been examined with different results. For instance, Moreira et al. (2011) find that the cost advantage of long-haul LCCs does not exceed 10%, concluding that "…the viability of long-haul LCC operations must be highly questionable". Conversely, other studies suggest higher cost advantages: Francis et al. (2007) identify a cost advantage of approx. 20%, Soyk et al. (2017) find one of about 30% and Morrell (2008) identifies a cost advantage of about 50%. Furthermore, other studies have been focusing on requirements under which long-haul low-cost operations may be successful. For instance, Daft and Albers (2012) state that an unbundling of the conventional legacy carrier product as well as adequate demand at the origin airport is needed. De Poret et al. (2015) do also stress the importance of adequate demand and consider boosting cargo and ancillary revenues as crucial. Furthermore, aircraft profitability analyses have been conducted. While earlier studies from, for instance, Pels (2008) and Morrel (2008) suggest wide-body aircraft to be used on long-haul routes, more recent studies from, e.g., Daft and Albers (2012) and De Poret et al. (2015) recommend the usage of smaller aircraft types such as the Boeing 787-800.

2.2 The business model concept

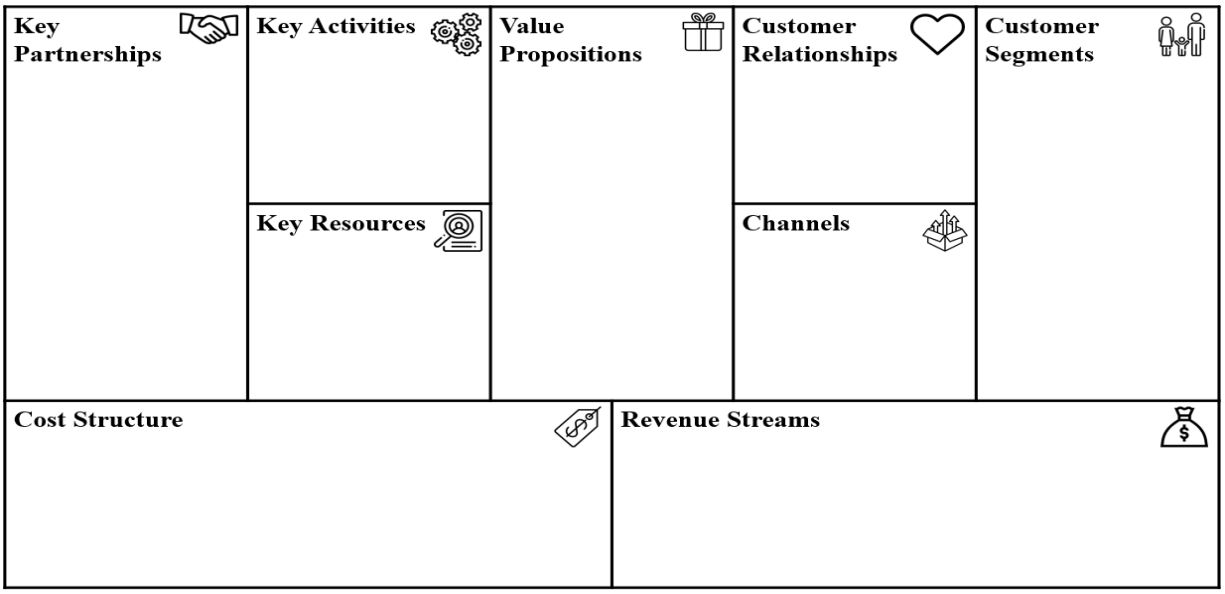
In the 1990s, the internet caused the rise of the business model concept and it gained increasing importance among both scholars and practitioners subsequently (Zott et al., 2010). A business model can be defined as "…the rationale of how an organization creates, delivers, and captures

value" (Osterwalder & Pigneur, 2009). Further, a business model can be considered as a collection of "…activities that a firm puts together to translate its strategy into action" (Markides, 2015). However, Foss and Saebi (2016) have conducted a vast amount of research on business models and find that there is no clear consensus on how a business model is best defined. Besides, Massa et al. (2017) argue that "…terminology has not kept pace with new ways of doing business and with how to describe business models…".

Since an organization is a complicated construct due to activities that affect and depend upon each other, it is of crucial importance to conceptualize these activities in the form of a business model (Markides, 2015). A clearly defined business model illustrates how a firm's strategies are coordinated with each other and, hence, strengthens its competitive advantage (Joyce & Paquin, 2016). Achieving a competitive advantage, however, requires a business model to be viable (Zwilling, 2011). A viable business model "…delivers the maximum value proposition and enhances the willingness among target customers to pay given the ability of a provider to optimise the real cost of the provision of services…" (Sharma & Gutierrez, 2010). Moreover, all stakeholders involved need to be willing to be part of the business model, implying that they can gain from it (Dsouza et al., 2015). Financially, a viable business model enables a firm to generate profits by creating customer value at an appropriate price, in order to keep the business sustainable (Zwilling, 2011; Sharma & Gutierrez, 2010).

The BMC, as proposed by Osterwalder and Pigneur (2009), is a popular tool for conceptualizing an organization (Joyce & Paquin, 2016) that aims at being "…simple, relevant, and intuitively understandable, while not oversimplifying the complexities of how enterprises function" (Osterwalder & Pigneur, 2009). Building upon that, the BMC can be considered a common language that enables users to challenge business models and innovate effectively. As illustrated in Figure 1, the BMC consists of nine building blocks that depict a firm's approach of how to achieve and sustain competitive advantage: customer segments, value propositions, channels, customer relationships, revenue streams, key resources, key activities, key partnerships and cost structure.

Figure 1: The business model canvas framework



Source: own illustration adapted from Osterwalder & Pigneur, 2009

Firstly, the *customer segments* building block describes the various target groups a firm wants to sell its products or services to. Assigning people or organizations into individual groups in terms of, for instance, specific attributes is important in order to more effectively satisfy their needs. Next, the building block of *value propositions* explains the different product and service bundles that a firm creates to meet the needs of the defined customer segments. Being of either quantitative (e.g., price) or qualitative nature (e.g., customer experience), value propositions "…may be innovative and represent a new or disruptive offer. Others may be similar to existing market offers, but with added features and attributes" (Osterwalder & Pigneur, 2009). The *channels* building block illustrates the different ways through which a firm plans to reach its customer segments. In this regard, communication, distribution, and sales channels are to be differentiated, serving different functions (e.g., advertising products and services). Then, the *customer relationships* building block defines the different types of connections a firm wants to build with its customer segments. Depending on the underlying motivation, customer relationships can be of either personal or automated nature with several types such as personal assistance and self-service that may be present simultaneously. The building block of *revenue streams* illustrates the different sources of revenue that a firm receives from each customer segment. While each revenue stream may possess distinct pricing schemes, a business model can have two distinct types of revenue streams: transaction revenues from single customer payments (e.g., asset sale) and recurring revenues from recurring payments (e.g., licensing). The building block of *key resources* "…describes the most important assets required to make a business model work" (Osterwalder & Pigneur, 2009). While key resources can be of physical,

financial, intellectual or human nature, the distinct type highly depends upon the business model. Next, the *key activities* building block depicts crucial actions that a firm needs to undertake to ensure successful operation. In this regard, a distinction is made between three different types of key activities: production (i.e., the design, manufacture and delivery of a product), problem-solving (i.e., the development of solutions to solve customer problems) or platforms (i.e., the management and marketing of the platform as well as the provisioning of the service). The building block of *key partnerships* represents the required network of partners and suppliers. In this context, it needs to be differentiated between four types of partnerships: partnerships between non-competitors, partnerships between competitors, joint ventures, and buyer-supplier relationships. Lastly, the *cost structure* building block comprises the costs involved in running a business model. A business model's cost structure is either cost-driven (i.e., minimizing costs in any conceivable way) or value-driven (i.e., prioritizing value creation over cost reduction), yet many business models fall somewhere in between (Osterwalder & Pigneur, 2009).

Due to nowadays' increasing societal expectation for organizations to embrace sustainability, developments have been made in the field of the BMC framework. Building upon the BMC, Joyce and Paquin (2016) have developed the Triple Layered BMC that extends the traditional BMC by adding an environmental and a social layer. The consideration of the economic, environmental and social layer allows for a "…more holistic and integrated view of a business model; which also supports creatively innovating towards more sustainable business models" (Joyce & Paquin, 2016).

2.3 Business model innovation

BMI has gained growing importance in management research over the last 15 years (Foss & Saebi, 2016). According to Geissdoerfer et al. (2018), "…at least two business model elements have to change for an innovation to qualify as a business model innovation". Due to changes in the business environment caused by, for instance, new regulatory environments and disruptive technologies, BMI became utterly important to firms, since competitors challenge their business models with both novel value propositions and revolutionary innovations (Broekhuizen et al., 2018). Hence, firms "…need to transform their business models more rapidly, more frequently and more far-reachingly than in the past" (Doz & Kosonen, 2010). In practice, however, BMI is very hard to accomplish due to substantial constraints that are involved, such as the required change of the firm's culture and the willingness to conduct business model testing. Furthermore, BMI involves an organizational paradox, since it requires firms to continue performing well in

their current business model while at the same time conducting an experimental approach to develop a new model. Thus, the current and the new business model need to co-exist for a prolonged period of time and, therefore, resources need to be shifted from one to the other (Chesbrough, 2010). Nevertheless, unlike ordinary ways that often involve significant investments (e.g., R&D) to achieve revenue growth or increase profit margins, BMI tends to be less costly (Zott & Amit, 2010).

Firms are using different strategies when approaching BMI; diverse strategies work for different companies, ranging from targeting new market segments to developing new revenue models (Giesen et al., 2007; Foss & Saebi, 2016). Although measuring financial performance as an outcome of BMI is difficult since a firm's performance and BMI are complexly interconnected, many studies argue that BMI can substantially contribute to the improvement of firm competitiveness. For instance, the development of a new value proposition may make customers pay higher prices, and the revision of a revenue model may attract new customers. This can lead to higher value creation that may, in turn, provide the firm a competitive advantage (Foss & Saebi, 2016).

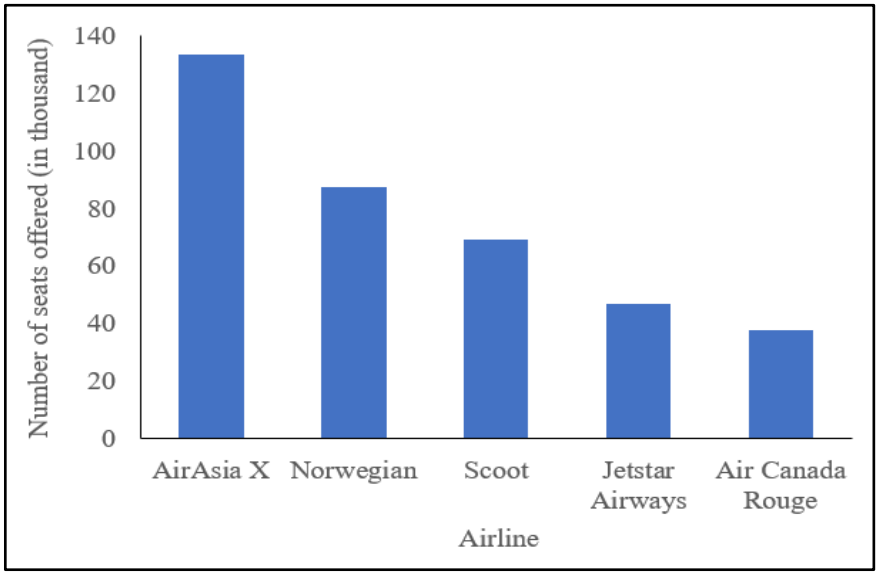
3 The case of Norwegian Air Shuttle ASA and Eurowings GmbH

3.1 The long-haul low-cost passenger airline industry

The concept of long-haul LCCs emerged with Loftleidir commencing its no-frills flights from Reykjavik to New York in 1948. Initially tested in Asia-Pacific with moderate success by Jetstar and AirAsia X, the long-haul low-cost business model was then brought to the Western world in 2013 when Norwegian operated its first transatlantic flights (CAPA – Centre for Aviation, 2018; Woods, 2018). Subsequently, an increasing number of long-haul LCCs arised since long-haul markets (i.e., flight distances larger than 4000 km) are highly attractive, largely contributing to the revenues of legacy carriers (Soyk et al., 2017; Flottau & Schofield, 2019; Binggeli & Weber, 2013). The expansion of the long-haul low-cost business model was promoted by both the maturity of traditional airline business models and new aircraft types (e.g., the Boeing 787) that allow for increased fuel efficiency. The long-haul low-cost airline market experienced a steep increase in available seating capacity, rising from 3.7 to 12.7 million seats offered within the time period of 2010 to 2016 (Blondel et al., 2017). Whereas in 2013, only three long-haul LCCs operated worldwide (Jetstar, AirAsia X and Scoot), today, about 20 long-haul LCCs exist that operate roughly 50 scheduled routes, representing approx. 3% of the total long-haul airline market (CAPA – Centre for Aviation, 2018; Blondel et al., 2017). Figure 2 presents an overview of the five largest long-haul LCCs in terms of the number of weekly

seats offered from October 2nd to October 8th, 2017. With about 135.000 weekly seats offered, AirAsia X was the largest long-haul LCC at that time, followed by Norwegian (about 85.000), Scoot (about 70.000), Jetstar Airways (about 45.000) and Air Canada Rouge (about 40.000). However, with 48 routes, Norwegian operated the most routes in 2017, followed by AirAsia X with 21 routes operated (CAPA – Centre for Aviation, 2017).

Figure 2: Overview of the five largest long-haul LCCs based on weekly seats (October 2nd to October 8th, 2017)



Source: own illustration based on CAPA – Centre for Aviation, 2017

Despite the proven financial success of LCCs on short- and medium-haul markets, most of their attempts have failed on long-haul markets (Soyk et al., 2017; Flottau & Schofield, 2019). Asian long-haul LCCs, however, tend to perform better than European ones, due to geographical differences, making Asia a more favourable market overall (e.g., cheaper labour) (CAPA – Centre for Aviation, 2017). While many long-haul LCCs cancelled routes and reduced their fleet size due to unprofitable operations, some carriers (e.g., Wow Air) most recently, have declared bankruptcy (Flottau & Schofield, 2019; Sigurdardottir, 2019). Consequently, the financial viability of the long-haul LCCs' business model remains a vividly discussed topic in the aviation industry (Flottau & Schofield, 2019). For instance, Moreira et al. (2011) find that "…the viability of long-haul LCC operations must be highly questionable", whereas Woods (2018) argues that "…long-haul, low cost is here to stay. It will work".

Compared to the legacy carriers' high-quality service that includes larger costs (Pels, 2008), LCCs have managed to operate with approx. 50% lower costs per available seat kilometre through streamlining processes such as removing frills (e.g., free food and beverages). However, on long-haul operations, the cost advantage is substantially reduced due to factors such as:

- Fuel costs, a major part of operating expenses, are much larger on long-haul flights (Morrell, 2008; Daft & Albers, 2012).

- Larger aircraft types are needed in addition to the models used in typical short-haul fleets, which is contrary to the operation of a single aircraft type and results into additional costs (e.g., cabin crew training) (Pels, 2008).
- On-board amenities such as meals and beverages are of increased importance to passengers due to the longer travel time (Binggeli & Weber, 2013).

Nowadays, long-haul LCCs are working on the refinement of the on-board customer experience, trying to provide an attractive product for passengers that is competitive compared to, for instance, legacy carriers' in-flight entertainment (Blondel et al., 2017). Currently, the low interest rate environment and stable economies are convenient to airlines, making them benefit from continuing growth in passenger demand as well as low oil prices (Woods, 2018). Yet, Woods (2018) notes that no upswing is going to last forever and that "…the next financial or economic crisis will impact the market hard".

However, especially with the introduction of new-generation aircraft that consume less fuel, it is to be predicted that LCCs will continue to enter long-haul markets. This raises the need for legacy carriers to reconsider their conventional long-haul business model (Soyk et al., 2017; Binggeli & Weber, 2013).

3.2 Methodology and data collection

To evaluate the future viability of the long-haul LCCs' business model, the case of Norwegian and Eurowings will be analysed, allowing for an in-depth investigation of their long-haul business models (Yin, 2014). Therefore, a cross-case analysis will be conducted to reveal similarities and differences in their operations (Ridder, 2017). The BMC framework, as previously introduced, builds the foundation for the cross-case analysis. Secondary data, collected from journal and newspaper articles, as well as publicly available information (e.g., CAPA), is used to fill in the BMC of the two airlines. Based upon both the findings of the cross-case analysis as well as primary data provided through an expert interview, an innovated business model for long-haul LCCs will be developed.

Norwegian and Eurowings are chosen for three reasons. First, the selected airlines do currently not operate profitably on long-haul markets, initiating the consideration of business model innovation. Second, their operating models differ, fulfilling the requirement of achieving variation on relevant dimensions as part of the cross-case analysis (Seawright & Gerring, 2008). Third, the aviation industry is heavily regulated and, hence, it seems reasonable to select two

long-haul LCCs that operate in a similar business environment in order to ensure that the innovated business model will be applicable for that specific business environment.

3.3 Business models of Norwegian Air Shuttle ASA and Eurowings GmbH

3.3.1 Norwegian Air Shuttle ASA

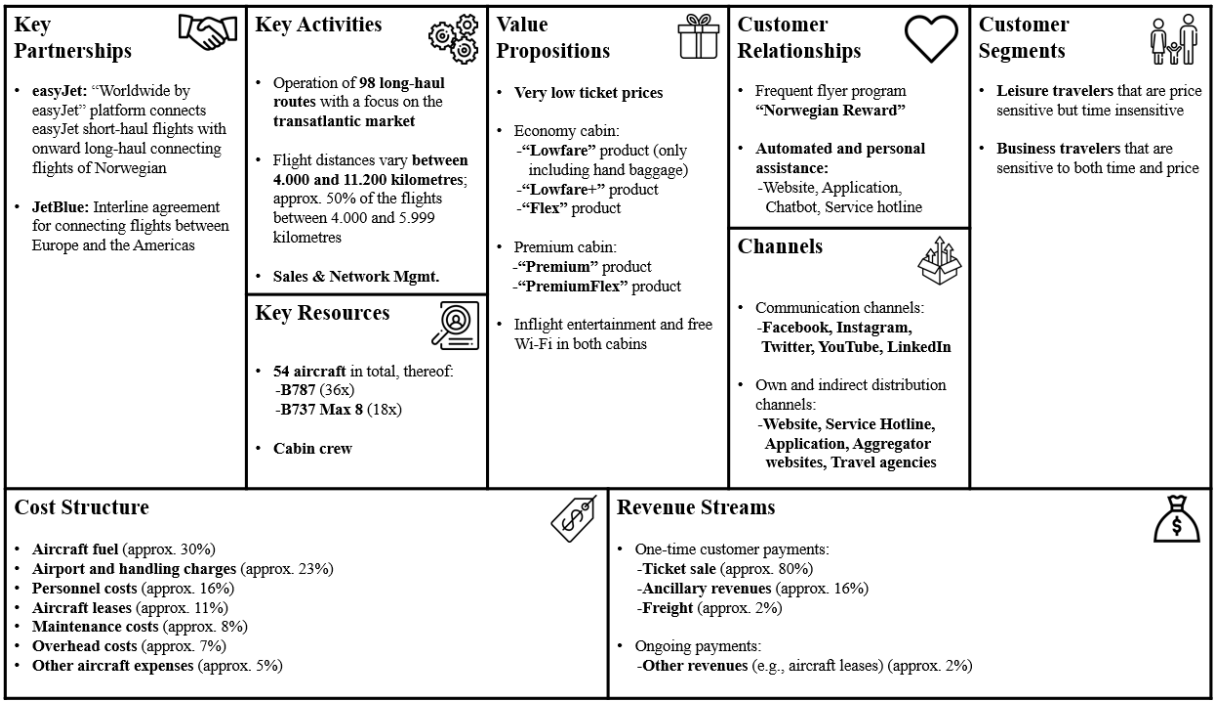
Norwegian, headquartered in Fornebu, is a low-cost airline that has been established in 1993. It is the parent company of the Norwegian Group, employing approx. 10.000 people in 14 countries across four continents. The Group consists of different subsidiaries in Norway, Denmark, Finland, Sweden, Spain, the United Kingdom, Ireland and Argentina. Norwegian's entities are further organized into four main business areas: Assets, Aircraft Operations, People and Services and Other Business Areas. While Norwegian belongs to the market leading European short-haul point-to-point airlines, it has also fortified its position on the long-haul transatlantic market over the last years. In 2018, Norwegian has operated approx. 500 routes to about 150 destinations. The Group currently holds six unique national air operator certificates and 29 bases globally (in Norway, Denmark, Finland, Sweden, Ireland, the United Kingdom, Spain, Thailand, the Netherlands, the United States, Italy, France and the French Caribbean) through which the Group runs its commercial airline activities (Norwegian Air Shuttle ASA, 2019a; CAPA – Centre for Aviation, 2013).

Despite the constant revenue growth over the last years (approx. €4 billion in 2018), Norwegian incurred a loss of approx. €145.000 last year. Based on the financial results and the business objectives, including generating profitability and return to shareholders, Norwegian has "…defined four strategic objectives towards 2022:

- Be the preferred airline for customers seeking value for money.
- Return to sustainable profitability.
- Fortify position as the leading short-haul carrier in the Nordics.
- Build a global low-cost alliance with our long-haul operation as the backbone" (Norwegian Air Shuttle ASA, 2019a).

Figure 3 illustrates Norwegian's long-haul low-cost business model. Therefor, the nine building blocks of the BMC are taken into consideration.

Figure 3: Norwegian's long-haul low-cost business model



Source: own illustration based on Norwegian Air Shuttle ASA, 2019a, b, c, d, e, f, g, h; Norwegian Air Shuttle ASA, 2017; Appendix I, II, III, IV

Key activities: To date, Norwegian is operating a total of 98 long-haul routes with a strong focus on the transatlantic market from its bases in Oslo, Stockholm, Copenhagen, London, Paris, Rome, Amsterdam, Barcelona and Madrid. The remaining non-transatlantic routes lead to, but are not limited to, leisure destinations such as Gran Canaria and destinations in Southeast Asia such as Bangkok. Taking flight distances between the origin and destination airport into consideration, Norwegian operates 49% of its long-haul flights within a flight distance of 4.000 to 5.999 kilometres, 20% of the flights within a flight distance of 6.000 to 7.999 kilometres and the remaining 31% of flights within a flight distance of at least 8.000 kilometres (Norwegian Air Shuttle ASA, 2019b; cf. Appendix I). The possession of different air operator certificates gives Norwegian a broad market access, ensuring the operation of its long-haul network. In this regard, Norwegian Air Shuttle ASA operates flights from Norwegian's European bases to North and South America, the Middle East and Southeast Asia, while Norwegian Air UK Ltd. operates routes from London-Gatwick to North and South America (Norwegian Air Shuttle ASA, 2019a). Also, Sales and Network Management are key activities to make Norwegian's business model work (cf. Appendix IX).

Key partnerships: Norwegian partners with easyJet, a leading European LCC, through the latter's "Worldwide by easyJet" platform since 2017. The platform is a connection service that enables easyJet passengers to connect their short-haul flights with onward long-haul connecting

flights of Norwegian in one unique booking. Norwegian's vast long-haul route network combined with easyJet's large European route network provides passengers the opportunity to travel to popular destinations at low ticket prices and with convenient connections (Norwegian Air Shuttle ASA, 2017). Additionally, recently, Norwegian and JetBlue, a major American LCC, have announced agreement for an upcoming interline agreement. "The partnership will allow customers to combine low fares in a convenient single booking for connecting flights between Europe and the Americas" (Norwegian Air Shuttle ASA, 2019c). Passengers have the option to book connecting flights on the website of both airlines. From Summer 2020 on, the partnership will create a multitude of novel connections for passengers on both sides of the market by connecting "…more than 60 U.S. and nearly 40 Caribbean and Latin American cities to Norwegian's network via New York-JFK, Boston and Fort Lauderdale airports" (Norwegian Air Shuttle ASA, 2019c).

Key resources: The long-haul fleet of Norwegian currently consists of a total of 54 aircraft, including 36 Boeing 787 Dreamliner and 18 Boeing 737 Max 8 aircraft. With the Boeing 787-800 and the Boeing 787-900, Norwegian possesses two different types of the Dreamliner: the Boeing 787-800 has 291 seats (32 in the Premium cabin and 259 in the Economy cabin), whereas the Boeing 787-900 has 344 seats (35 in the Premium cabin and 309 in the Economy cabin) in total. Norwegian's fleet is one of the youngest globally, averaging 3.8 years (Norwegian Air Shuttle ASA, 2019d). The cabin crew are another major key resource of Norwegian. They are considered as Norwegian's faces, being in charge of the passengers' well-being as well as the provision of superior service aboard (Norwegian Air Shuttle ASA, 2019e).

Customer segments: Norwegian's long-haul business model distinguishes between market segments that have (slightly) different needs. Passengers have different sensitivities concerning price and time of the trip that may, in turn, differ from one trip to another. Norwegian mainly focuses on attracting leisure travelers that are price sensitive but time insensitive. According to Belobaba et al. (2009), this group is characterized by being "…willing to change their time and day of travel, and even destination airports, to find a seat at the lowest possible fare." Besides, Norwegian aims at attracting business travelers that are sensitive to both time and price. Passengers of this segment must necessarily take a flight, but are willing to, for instance, make trips at flight times that are less convenient, in order to find a low fare (Belobaba et al., 2009).

Value propositions: Norwegian unbundles its services and in-flight amenities into different products to meet the needs of the two customer segments mentioned above. In this regard, two

different cabins (Economy and Premium cabin) exist and five different products are offered on long-haul flights (cf. Appendix II). Norwegian's "Lowfare" product (i.e., the cheapest fare available, only including hand baggage of up to 10 kilogram) is specifically tailored to the customer segment of leisure travelers that are price sensitive and insensitive to time constraints. Norwegian offers significantly lower fares compared to other carriers that operate the same long-haul routes. For instance, passengers can book the "Lowfare" product one-way from Paris (CDG) to New York (JFK) for, on average, €140 in calendar week ten of 2020, undercutting Air France and Delta Air Lines by 1513%. By offering the "Lowfare" product for, on average, €183 one-way from Oslo (OSL) to Dubai (DXB) in calendar week eleven of 2020, Norwegian undercuts Emirates by 105% (cf. Appendix III). Furthermore, leisure travelers that want additional amenities beside the hand baggage have the option to book the "Lowfare+" and "Flex" product that are both available for the Economy cabin (cf. Appendix II). Norwegian's Premium cabin allows for increased convenience and is destined for business travelers that are sensitive to both time and price. Beside having a larger seat pitch, the "Premium" and "PremiumFlex" product come with additional amenities such as checked baggage and meals, compared to the "Lowfare" product. With the "PremiumFlex" product, passengers do also have airport lounge access (cf. Appendix II). Moreover, in-flight entertainment is available on any flight and free Wi-Fi is available on most of Norwegian's long-haul flights (Norwegian Air Shuttle ASA, 2019f).

Channels: Norwegian uses Facebook, Instagram, Twitter, YouTube and LinkedIn as communication channels to promote its destinations, products and services as well as inform customers about organizational developments. The company posts very frequently and has thus reached a solid follower base that amounts to approx. 1.28 million followers on Facebook, 353.000 followers on Instagram, 113.000 followers on Twitter, 18.300 followers on YouTube and 115.000 followers on LinkedIn (cf. Appendix IV). As for the sale of tickets, Norwegian uses both its own channels and indirect distribution channels. Customers can book flights directly through Norwegian's website, the customer service hotline and the "Norwegian Travel Assistant" application. Furthermore, customers can book flights indirectly through both travel fare aggregator websites (e.g., www.momondo.com) and travel agencies. In this regard, Norwegian has recently renewed its partnership with Amadeus IT Group SA, a Spanish information technology company that provides the same-named global distribution system used by travel agents to access airlines' fares (Saki, 2018). The share of ticket sale through own channels was 79% in 2018 (Norwegian Air Shuttle ASA, 2019a).

Customer relationships: Norwegian maintains and solidifies customer relationships through its frequent flyer program "Norwegian Reward". Cash points are earned every time a member books a flight with Norwegian or uses a service from Norwegian Reward's partners. To redeem cash points, members can use them for their next Norwegian flight (either receiving a partial or full redemption) and several perks such as extra baggage, seat reservation and booking changes on future flights (Norwegian Air Shuttle ASA, 2019g). Furthermore, Norwegian provides both automated and personal assistance to customers for pre- (e.g., profile and general enquiries) and after-sales service issues (e.g., flight booking and feedback). As for automated assistance, customers can either use the website, the "Norwegian Travel Assistant" application or the chatbot that answers frequently asked questions. On the other hand, personal assistance is provided through the customer service hotline and the Facebook Messenger (Norwegian Air Shuttle ASA, 2019h).

Revenue streams[1]*:* Norwegian generates revenues through both one-time customer payments and ongoing payments. About 80% of the total revenues of approx. €4 billion that was generated in 2018 accounts for the sale of tickets, representing one-time customer payments of both the previously defined leisure and business traveler segment. In this context, the United States is the most important long-haul market, contributing with approx. 17% to Norwegian's total revenues. Furthermore, ancillary revenues that comprise ticket-related products and services such as seating and premium upgrades, amount to about 16% of the total revenues, being one-time customer payments as well. Freight carried on passenger flights can be considered another one-time payment revenue generating source, contributing with approx. 2% to the total revenues in 2018. Lastly, other revenues, consisting of third-party revenues such as lease of aircraft, amounted to about 2% of Norwegian's total revenues and can be considered as revenues from ongoing payments (Norwegian Air Shuttle ASA, 2019a).

Cost structure[2]*:* Norwegian's long-haul low-cost business model is cost-driven, seeking to minimize costs wherever possible. In 2018, Norwegian had total expenses of about €4.1 billion. Thereof, aircraft fuel accounted for the largest share with about 30%, followed by airport and handling charges (approx. 23%), personnel costs (approx. 16%), aircraft leases (approx. 11%),

[1] The revenue streams, including respective revenues, also relate to the short- and medium-haul business. Norwegian's annual report does not present a separate revenue summary of the long-haul business.
[2] This cost structure is consolidated, including the short- and medium-haul business as well. Norwegian's annual report does not present a separate cost structure of the long-haul business.

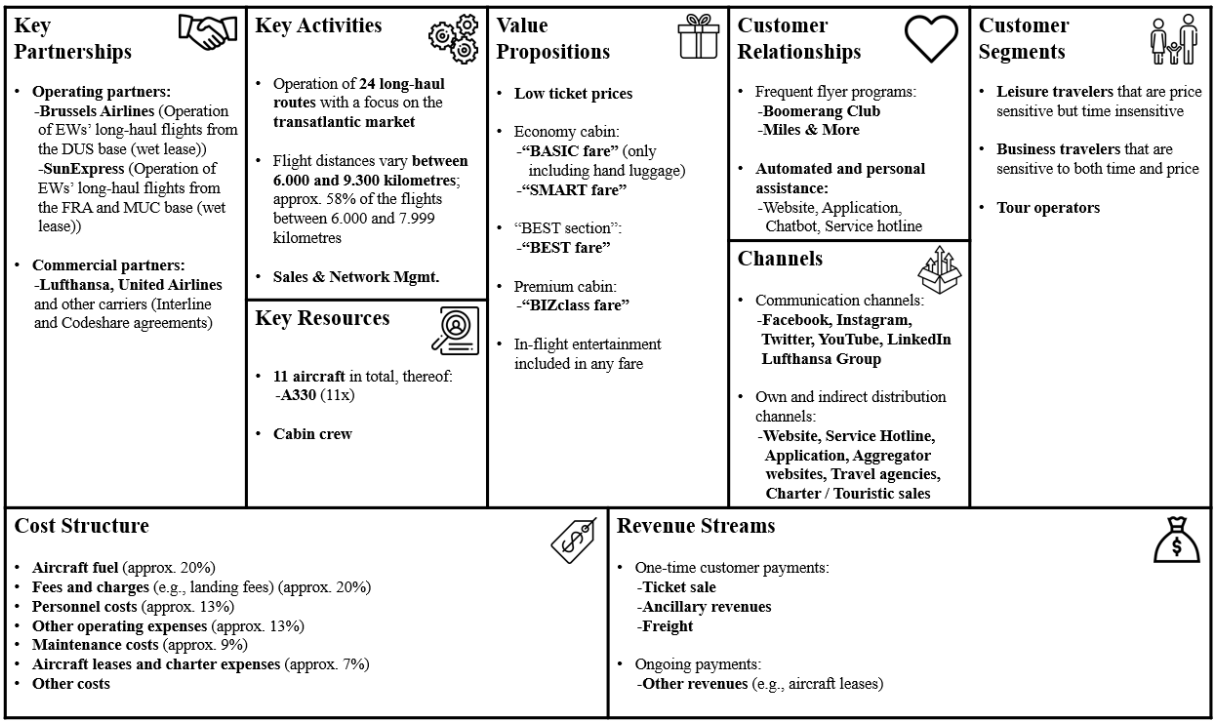
maintenance costs (approx. 8%), overhead costs (approx. 7%) and other aircraft expenses (approx. 5%) (Norwegian Air Shuttle ASA, 2019a).

3.3.2 Eurowings GmbH

Eurowings, headquartered in Dusseldorf and founded in 1996, is the Lufthansa Group's low-cost airline. The German airline is part of the Eurowings Group that also includes Brussels Airlines. Further, the Eurowings brand consists of Eurowings Europe, Germanwings, Luftfahrtgesellschaft Walter and SunExpress (Lufthansa Group, 2019a). Eurowings, currently employing 10.000 people and holding 14 bases, specializes in low-cost direct flights and has been offering long-haul flights since 2015. With a current fleet of 205 aircraft and more than 210 destinations in 60 countries around the world, Eurowings is the third-largest European point-to-point carrier, having carried 38 million passengers in 2018 (Eurowings GmbH, 2019a; Lufthansa Group, 2019a).

The German airline has experienced strong growth in 2018 due to the acquisition of major parts of the former Air Berlin fleet. This has both led to an increase in operational complexity and enabled Eurowings to become the leading airline at eight airports in Germany, Austria and Belgium. Despite the revenue growth of 5%, on average, over the last years (€4.2 billion in 2018), Eurowings incurred a loss of €231 million in 2018 (Lufthansa Group, 2019a). Due to the ongoing negative results, Lufthansa is going to take over the commercial planning of Eurowings' long-haul operations. In this context, Lufthansa expects Eurowings to break even in 2021 (Hegmann, 2019). The strategic goal of Eurowings is to establish the airline as an essential pillar of the Lufthansa Group, further develop it to fortify its leading position and make it become the number three in the European low-cost market in the coming years (Eurowings GmbH, 2019a). Figure 4 depicts Eurowings' long-haul low-cost business model.

Figure 4: Eurowings' long-haul low-cost business model



Source: own illustration based on Lufthansa Group, 2019a, b; Eurowings GmbH, 2019b, c, d, e; Gasser, 2019; Appendix V, VI, VII, VIII

Key activities: Eurowings currently operates a total of 24 long-haul routes with a strong focus on the transatlantic market. The routes are operated from its bases in Dusseldorf, Frankfurt am Main and Munich. Taking flight distances between the origin and destination airport into consideration, the German airline operates 58% of its long-haul flights within a flight distance of 6.000 to 7.999 kilometres and the remaining 42% of the flights within a flight distance of at least 8.000 kilometres. (Eurowings GmbH, 2019b; cf. Appendix V). Eurowings plans and sells, but does not operate the long-haul flights itself; Brussels Airlines and SunExpress operate the flights (Gasser, 2019). Hence, the operational responsibility for its long-haul flights is transferred to these two partner airlines (s. next paragraph), but the commercial responsibility remains at Eurowings. Also, Sales and Network Management are key activities to make Eurowings' business model work (cf. Appendix IX).

Key partnerships: Eurowings has both operating and commercial partners. As for operating partners, Brussels Airlines and SunExpress operate Eurowings' long-haul flights on the basis of wet lease agreements. In this context, Brussels Airlines is operating Eurowings' flights from the Dusseldorf base, while SunExpress is operating the flights from the Frankfurt am Main and Munich base (Lufthansa Group, 2019a). The wet lease agreements cover several Airbus A330 widebody aircraft. As for commercial partners, Eurowings has interline and codeshare agreements with several airlines in place: most relevantly, with Lufthansa and United Airlines

to both market each other's flights and provide as well as receive feeder services for the operation of transatlantic routes (Eurowings GmbH, 2019c).

Key resources: The long-haul fleet of Eurowings currently consists of a total of eleven Airbus A330-200/300. With the Airbus A330-200 and the Airbus A330-300, Eurowings possesses two different types of the Airbus A330: the A330-200 310 seats, whereas the A330-300 has 283 seats in total (Lufthansa Group, 2019b). The German airline has an average fleet age of eleven years with a high age spread of 25 years (Lufthansa Group, 2019c). Another key resource of Eurowings is its cabin crew. They are responsible for the provision of a great travel experience to keep the customers happy (Eurowings GmbH, 2019d).

Customer segments: Eurowings focuses on attracting both leisure travelers that are price sensitive but time insensitive, and business travelers that are sensitive to both time and price. The former group is characterized by being "…willing to change their time and day of travel, and even destination airports, to find a seat at the lowest possible fare" (Belobaba et al., 2009). Passengers of the latter segment must necessarily take a flight, but are willing to, for instance, make trips at flight times that are less convenient, in order to find a low fare (Belobaba et al., 2009). Besides, Eurowings targets tour operators that can either charter an entire aircraft or sell single seats through dynamic packaging (cf. Appendix IX).

Value propositions: Eurowings unbundles its services and in-flight amenities into different products to meet the needs of the two customer segments mentioned above. The German airline offers four different products and a three-class cabin, including a standard economy class ("BASIC" and "SMART fare"), a section labelled as "BEST section" ("BEST fare") that offers increased legroom, and a premium class ("BIZclass fare") with a lie-flat seat in an exclusive area. Eurowings' "BASIC fare" (i.e., the cheapest fare offered, only including hand luggage of up to eight kilograms) is specifically tailored to leisure travelers that are price sensitive and insensitive to time constraints. In case customers of this segment want to have a meal included as well as a one bag up to 23 kilograms free of charge, they can book the "SMART fare" (cf. Appendix VI). Eurowings offers low fares on long-haul routes. For instance, passengers can fly from Frankfurt am Main (FRA) to Windhoek (WDH) one-way for, on average, €415 with the "BASIC fare" in calendar week ten of 2020, undercutting Air Namibia, Namibia's national carrier, by 57%. Furthermore, passengers can book the "BASIC fare" one-way from Dusseldorf (DUS) to New York (EWR) for, on average, €220 in calendar week eleven of 2020. The leisure destination Havana (HAV) can be reached for, on average, €326 one-way from Dusseldorf

(DUS) in March 2020 (cf. Appendix VII). Eurowings' "BEST section" is destined for both leisure and business travelers since the additional amenities such as the comfort seat may be appealing to both customer segments. The "BIZclass fare", however, is specifically tailored to business travelers. In-flight entertainment is included in any fare, while passengers need to pay a surcharge to access Wi-Fi (cf. Appendix VI).

Channels: Eurowings uses Facebook, Instagram, Twitter, YouTube and LinkedIn as communication channels to both promote its destinations, products and services, and inform customers about organizational developments. Being part of the Lufthansa Group, Eurowings is getting promoted through the Group's communication channels as well. The German airline posts very frequently on all channels and, hence, has reached a solid follower base: approx. 947.000 followers on Facebook, 307.000 followers on Instagram, 89.000 followers on Twitter, 18.900 followers on YouTube and 13.000 followers on LinkedIn (cf. Appendix VIII). Taking the sale of tickets into consideration, Eurowings uses both its own channels and indirect distribution channels. Passengers can book flights directly through Eurowings' website, the customer service hotline and the Eurowings application. Besides, passengers can book flights indirectly through both travel fare aggregator websites such as momondo.com, touristic sales and travel agencies. In this regard, customers have the option to book combined flights with Eurowings' partner airlines at travel agencies (Eurowings GmbH, 2019c; cf. Appendix IX).

Customer relationships: Eurowings maintains and solidifies customer relationships through its loyalty program "Boomerang Club" and Lufthansa Group's "Miles & More" program, Europe's leading frequent flyer program. Miles will be earned after every flight that can be redeemed to take advantage of all related services such as award flights (Eurowings GmbH, 2019e). Besides, Eurowings provides both automated and personal customer assistance. With regard to automated assistance, passengers can either use the website or the application. On the other hand, personal assistance is provided through the customer service hotline and the Facebook Messenger (Eurowings GmbH, 2019a; cf. Appendix VIII).

Revenue streams[3]: The split between passenger revenues, ancillary revenues and other revenues of Eurowings is not reported. However, it can be assumed that the German airline generates revenues through both one-time customer payments and ongoing payments since this is the

[3] The revenue streams, including respective revenues, also relate to the short- and medium-haul business. Lufthansa Group's annual report does not present a separate revenue summary of Eurowings' long-haul business.

traditional approach in the airline industry. The largest part of the total revenues is generated through one-time customer payments, primarily the sale of tickets to leisure and business travelers, followed by ancillary revenues (mainly through the "BASIC fare" and "SMART fare") and carried freight. Ongoing payments generated through other revenues such as lease may only constitute a small part of the total revenues.

Cost structure[4]*:* The cost structure of Eurowings' long-haul low-cost business model is cost-driven, seeking to minimize costs wherever possible. In 2018, Eurowings had total expenses of about €4.8 billion. Thereof, aircraft fuel accounted for the largest share with about 20%, followed by fees and charges such as landing fees (approx. 20%), personnel costs (approx. 13%), other operating expenses (approx. 13%), maintenance costs (approx. 9%), aircraft leases and charter expenses (approx. 7%), and other costs (Lufthansa Group, 2019a).

3.4 Comparison of business models

Taking the key activities into consideration, Norwegian and Eurowings differ greatly in terms of the number of long-haul routes operated and the routes' flight distances. In this context, Norwegian currently operates more than three times as many long-haul routes as Eurowings does, and primarily focuses on short long-haul flight distances between 4.000 and 5.999 kilometres, while Eurowings focuses on flight distances between 6.000 and 7.999 kilometres.

The key partnerships of the two airlines show that their operating models differ; Eurowings does not operate the long-haul routes itself, having wet lease agreements with Brussels Airlines and SunExpress instead. Norwegian, however, operates the routes itself. Both airlines have interline agreements with selected carriers in place to extend the number of flight connections for their passengers. Additionally, Eurowings has codeshare agreements in place.

Considering the long-haul fleet, Norwegian uses the Boeing 787 Dreamliner and Boeing 737 Max 8 aircraft. Eurowings, however, uses a homogenous fleet of Airbus A330 aircraft.

Both airlines target leisure travelers that are price sensitive but time insensitive, as well as business travelers that are sensitive to both time and price. Besides, Eurowings focuses on tour operators. However, the two airlines differ in the number of both cabins and products offered. While Norwegian offers a two-class cabin with five different fares, Eurowings offers a three-

[4] This cost structure is consolidated, including the short- and medium-haul business as well. Lufthansa Group's annual report does not present a separate cost structure of Eurowings' long-haul business.

class cabin with four different fares. Furthermore, Norwegian offers in-flight entertainment and Wi-Fi, if available, for free, whereas Eurowings does only offer in-flight entertainment for free.

Taking communication channels into consideration, both airlines use the same channels (Facebook, Instagram, Twitter, YouTube and LinkedIn), having reached a solid follower base by posting very frequently. The only difference is that Lufthansa Group raises awareness about Eurowings' destinations, products and services on their communication channels as well. Furthermore, both airlines sell their tickets through their own (e.g., website) and indirect distribution channels (e.g., travel agencies).

Besides, the two airlines use the same strategies to maintain and solidify their customer relationships. While Norwegian uses its frequent flyer program "Norwegian Reward", Eurowings uses both its own "Boomerang Club" and Lufthansa Group's "Miles & More" program. Besides, the two airlines provide automated (e.g., application) and personal assistance (e.g., customer service hotline) to customers.

It is likely that both airlines generate revenues through one-time customer payments and ongoing payments. Also, Norwegian's and Eurowings' long-haul low-cost business model are cost-driven. In this context, it is noticeable that aircraft fuel accounts for a significantly larger share to Norwegian's operating costs compared to aircraft fuel in the case of Eurowings. However, the shares for the remaining cost blocks are very similar.

Figure 5 summarizes the similarities and differences of Norwegian's and Eurowings' long-haul low-cost business model. Major differences in terms of the operating model can be observed, which will be further analysed in the following chapter.

Figure 5: Overview of the similarities and differences of Norwegian's and Eurowings' business model

	Norwegian	Eurowings
Key Activities	• Operation of 89 long-haul routes • Focus on flight distances between 4.000 and 5.999 kilometres	• Operation of 24 long-haul routes • Focus on flight distances between 6.000 and 7.999 kilometres
Key Partnerships	• Operating the routes itself • Interline agreements	• Routes operated by Brussels Airlines and SunExpress based on wet lease agreements • Interline and codeshare agreements
Key Resources	• B787 • B737 Max 8	• A330
Customer Segments	• Leisure and business travelers	• Leisure and business travelers as well as tour operators
Value Propositions	• Two-class cabin • Five different fares • Free in-flight entertainment and Wi-Fi	• Three-class cabin • Four different fares • Free in-flight entertainment
Channels	• Facebook, Instagram, Twitter, YouTube and LinkedIn (solid follower base) for communication purposes • Own and indirect distribution channels for ticket sale	• Facebook, Instagram, Twitter, YouTube, LinkedIn (solid follower base) and Lufthansa Group's channels for communication purposes • Own and indirect distribution channels for ticket sale
Customer Relationships	• Frequent flyer program "Norwegian Reward" • Automated and personal customer assistance	• Frequent flyer program "Boomerang Club" and Lufthansa Group's "Miles & More" program • Automated and personal customer assistance
Revenue Streams	• One-time customer payments and ongoing payments	• One-time customer payments and ongoing payments
Cost Structure	• Cost-driven business model • Aircraft fuel: approx. 30%	• Cost-driven business model • Aircraft fuel: approx. 20%

Source: own illustration based on Figure 3; Figure 4

4 Results

4.1 General findings

The fact that Norwegian currently operates almost four times as many long-haul routes as Eurowings is salient, illustrating Norwegian's aggressive expansion that has come at a high cost (Asquith, 2019). However, for a long time, Norwegian seems to have underestimated the complexity that the operation of long-haul routes brings, compared to the operation of short- and medium-haul routes (cf. Appendix IX). After the airline placed a substantial aircraft order as part of its fleet expansion in 2012, net debt and aircraft lease liabilities increased to $7.1 billion (approx. €6.4 billion) (Asquith, 2019). Similarly, Eurowings has experienced strong growth after acquiring significant parts of the former Air Berlin fleet at the end of 2017. According to industry experts, the airline was not able to cope with the growth, resulting in an increase of flight cancellations by ten times in the first half of 2018, compared to the previous year (Reichert, 2018).

While Norwegian is a uniform brand operating under the Group's umbrella, the Eurowings Group consists of different brands. This setup has been confusing customers since it is not clear whether the airline operates as a point-to-point carrier, a LCC that competes with easyJet and Ryanair, a carrier that provides feeder services to the Lufthansa hubs Frankfurt am Main and Munich, or a touristic long-haul carrier. Additionally, passengers may experience several brands throughout their journey. For instance, passengers may experience the Lufthansa brand

when booking on the Lufthansa website, but then enter a Eurowings aircraft with a SunExpress crew aboard. The complexity that results from the different brands makes it extremely difficult to create a satisfying customer experience (or at least awareness); instead, it leads to confusion and, hence, low customer satisfaction.

Furthermore, Eurowings belongs to the Lufthansa Group which is of both an advantage and disadvantage. In this context, the German airline benefits from being integrated into the Lufthansa Group sales organization, but is restricted in its flexibility. For instance, Eurowings is not able to offer cheap flights that fall under the transatlantic joint venture between Lufthansa Group, United Airlines and Air Canada. Norwegian, however, enjoys a higher degree of flexibility since it does not belong to any other corporation (cf. Appendix IX).

Both Norwegian and Eurowings have strong commercial partnerships. With easyJet and JetBlue, Norwegian has partners on both sides of the Atlantic, which benefits its long-haul operations: easyJet provides feeder services in Europe while JetBlue provides feeder services in the United States (Norwegian Air Shuttle ASA, 2017; Norwegian Air Shuttle ASA, 2019c). On the other hand, Eurowings benefits from being part of Lufthansa Group and, hence, receives feeder services mainly from Lufthansa in Europe and United Airlines in the United States (Eurowings GmbH, 2019c).

With the Boeing 787 Dreamliner and the Boeing 737 Max 8 aircraft, Norwegian operates two comparably fuel-efficient aircraft types, allowing the airline to offer cheap flights. Hence, the financial problems were not rooted in the fleet itself; instead, Norwegian suffered misfortune due to groundings of both aircraft types. While the Boeing 787 Dreamliner had troubles with the Rolls Royce engine over the last few years, the two recent fatal crashes of Lion Air and Ethiopian Airlines forced Norwegian to ground its Boeing 737 Max 8 fleet. Consequently, grounded aircraft result in a loss of money, since they cannot be utilized (Asquith, 2019). In comparison, Eurowings operates a comparably old and fuel-inefficient fleet of aircraft (Lufthansa Group, 2019c; cf. Appendix IX).

Despite focusing on the transatlantic market, Norwegian has cancelled ten routes between the U.S. and Europe starting with the 2019/20 winter season, representing a drop of approx. 25% in the number of flights, compared to last year's winter season. Hence, Norwegian's aggressive expansion continues to be scaled back. Although operating transatlantic routes profitably is challenging since they are usually highly competitive (Nikel, 2019), the partnership with JetBlue that has been formed very recently, implies that Norwegian seems to hold on to the

transatlantic market. Yet, it remains difficult for Norwegian to generate profits given its very cheap flights, even though the airline operates a fuel-efficient fleet of aircraft (Farmbrough, 2019; cf. Appendix III). Furthermore, the airline "…lacks the lucrative business and first-class passengers that make up the profits on other transatlantic carriers, although reviews of its 787 premium economy service, with 46-inch leg-room, compare favorably with other airlines'" (Farmbrough, 2019). These passengers usually have a high degree of loyalty, which is difficult to build up with the Norwegian Reward loyalty program since it does not yield network effects compared to Lufthansa Group's Miles & More loyalty program or an alliance membership such as Star Alliance (cf. Appendix IX).

With earnings deteriorating, Norwegian "…has just tapped up their bondholders for a two-year extension in paying back $380 million of debt…" (Asquith, 2019). Goldstein (2019) concludes that Norwegian's expansion of its long-haul network has lastingly damaged the airline's balance sheet with an extremely high debt level. This has forced Norwegian to change its strategy, focusing on profitability instead of growth. Former CEO Bjørn Kjos, who stepped down in July 2019, noted:

> "Norwegian has been through a period with significant growth. Focus going forward will increasingly be on cost savings and CAPEX reductions. We will now get in place a strengthened balance sheet that supports the further development of the company" (Farmbrough, 2019).

Although the cost reduction program runs well and the airline delivers on its new business strategy, Lufthansa and British Airways are not bidding to acquire assets of Norwegian anymore. The airline may not be able to maintain independency; many industry experts predict that Norwegian will need external financing to continue its low-cost long-haul operations (Asquith, 2019). In comparison, Eurowings has the substantial advantage that it belongs to the Lufthansa Group, since Lufthansa will continue supporting the airline (Kiani-Kreß, 2019). To tackle the problems and return to profitability, Eurowings has announced several measures, such as modernizing the fleet of aircraft, substantially decreasing overhead costs (e.g., through a reduction of the number of air operator certificates), and transferring commercial responsibility for long-haul routes to Lufthansa Group to refocus on the short-haul network. Thereby, Thorsten Dirks, CEO of Eurowings, predicts that the German airline will break even in 2021 and achieve an adjusted EBIT margin of at least 8% in the long run (Lufthansa Group, 2019c).

4.2 Assessment of business model viability

The long-haul LCCs' business model seems to be principally viable, but both Norwegian and Eurowings show that operating profitably remains difficult, regardless of the operating model and organizational structure. The aggressive expansion of the two airlines implies that both seem to have underestimated the complexity of operating long-haul routes. The cost base is a decisive factor in the long-haul LCCs' business model; the substantial cost reduction has been giving LCCs a comparative advantage over legacy carriers on short- and medium-haul markets. However, this cost advantage cannot be achieved on long-haul operations, since the cost base grows disproportionately, especially with the use of wide-body aircraft (e.g., the Airbus A330) that are operated by both Norwegian and Eurowings. Besides, Norwegian has operated a narrow-body aircraft, the Boeing 737 Max 8, on long-haul routes; the grounding, however, required Norwegian to cancel the respective routes. Another decisive factor is the maximization of revenues per seat. Long-haul LCCs usually target hub airports to fill seats on the wide-body aircraft based on the higher passenger demand, compared to smaller airports. However, according to Schulz (2019), on these markets, they compete with legacy carriers that can easily cope with selling a small contingent of tickets at a similar price.

More efficient narrow-body aircraft may open up new potentials for LCCs on long-haul markets. Specifically, the Airbus A321 XLR could make this possible; the first aircraft will be delivered in 2023. The new-generation engines allow for a fuel-efficient operation and flight distances of up to 8.700 kilometres, exceeding the maximum flight distance of the Boeing 737 Max 8 aircraft. Besides, due to the reduced number of seats compared to wide-body aircraft, long-haul LCCs can target smaller airports that are not as competitive as hub airports. With the use of more efficient narrow-body aircraft, long-haul LCCs may be able to exploit new markets, keep the cost base at a low level and, hence, operate profitably (Schulz, 2019). Hence, the business model of long-haul LCCs needs to be innovated to ensure future viability.

4.3 Presentation of innovated business model

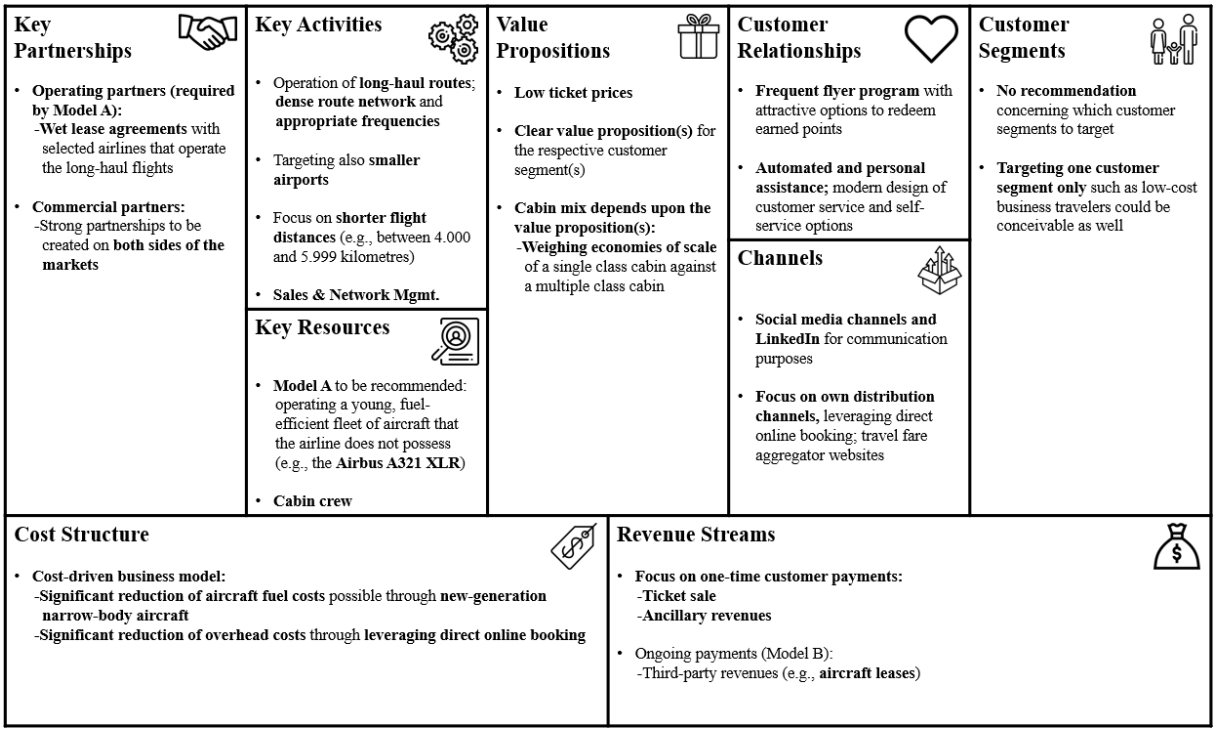
Having a lean operating model seems critical to the success of the innovated business model of long-haul LCCs, which is summarized in Figure 6[5]. In this regard, two different models can be considered.

[5] Figure 6 applies to both Model A and Model B. Notes are added whenever the input provided is specifically required by either model or one model is to be recommended.

- Model A: a completely virtual model on the basis of wet lease agreements; the focus is solely put on sales and marketing activities.
- Model B: a very simple model with a single type of aircraft.

However, it needs to be noted that Model A is difficult to implement, since it requires a long-haul LCC to be part of a Group; otherwise, the likelihood of finding operating partners is comparably low. For instance, Eurowings initially failed with its "plug and play" approach (i.e., the connection of external airlines to the model), because there were no external airlines interested in joining (cf. Appendix IX). Hence, Model B serves as an alternative option.

Figure 6: The innovated business model of long-haul low-cost carriers



Source: own analysis

Key activities: The operation of long-haul routes remains a key activity; yet, I cannot recommend a specific number of routes to be operated. In this context, a dense route network, offering passengers a wide range of connections through at least one central hub, and appropriate frequencies are of great importance; otherwise, the customer acquisition costs will be very high. The route network density and frequencies, in turn, depend upon the customer segments that the airline targets. For instance, in case the airline wants to attract low-cost business travelers, it is required to offer higher weekly frequencies to the respective business destination, while leisure travelers demand attractive leisure destinations for which the frequencies are of less importance. Besides, new-generation narrow-body aircraft such as the

Airbus A321 XLR may open up new potentials in terms of destinations. In this regard, due to the reduced number of seats, long-haul LCCs can target smaller airports that are not as competitive as hub airports (cf. Appendix IX). Taking flight distances into consideration, I recommend long-haul LCCs to focus on shorter flight distances (e.g., flight distances between 4.000 and 5.999 kilometres), since the scope for cost differentiation over legacy carriers is significantly reduced for long flight distances, according to De Poret et al. (2015). Other key activities include Sales and Network Management to make the business model work. To boost sales, long-haul LCCs must either be integrated into a strong sales organization (e.g., Eurowings with Lufthansa Group) or have strong commercial partnerships (cf. Appendix IX).

Key partnerships: Having strong key partners is of great importance to the long-haul LCCs' business model. In this context, it needs to be differentiated between operating and commercial partners. Model A requires having operating partners. Therefor, LEVEL, the long-haul low-cost airline brand of the International Airlines Group, serves as a good example. LEVEL has wet lease agreements with selected airlines of International Airlines Group that operate its long-haul flights (International Airlines Group, 2019). This model allows for higher flexibility, since the airline can grow and shrink quickly by concluding and terminating contracts. However, it needs to be noted that this model only tends to work on the condition that the long-haul LCC belongs to a Group. Furthermore, commercial partnerships allow passengers to freely combine flights and take advantage of additional travel options and connecting flights. In case the airline focuses on transatlantic long-haul flights, it needs to ensure that strong partnerships are created on both sides of the Atlantic (e.g., following the example set by Norwegian) to benefit from the partners' sales strength in their home markets.

Key resources: The fleet of aircraft is another success factor of the long-haul LCCs' business model. The interviewee recommends Model A: operating a young, fuel-efficient fleet of aircraft that the airline does not possess, since it allows for higher flexibility (cf. Appendix IX). On the other hand, Model B requires operating a single type of aircraft. However, it needs to be noted that not every long-haul aircraft type fits any route operated (cf. Appendix IX). In either model, I recommend the use of fuel-efficient aircraft types such as the Boeing 787 Dreamliner. Prospectively, the Airbus A321 XLR should be taken into consideration, as explained previously. Furthermore, another key resource is the cabin crew that is supposed to provide superior service to customers aboard.

Customer segments: Generally, the interviewee cannot make any recommendation concerning which customer segments long-haul LCCs should target (cf. Appendix IX). In this regard, targeting one customer segment only such as low-cost business or leisure travelers could be conceivable as well; this, in turn, requires the adaptation of the route network density and frequencies to the respective customer segment(s).

Value propositions: Beside low fares, it is difficult for LCCs to offer value on long-haul routes. Hence, long-haul LCCs need to have clear a value proposition for their respective customer segment(s). Furthermore, the value proposition needs to be decisive compared to, for instance, what legacy carriers offer in their Economy class, to convince passengers. Generally, long-haul LCCs must unbundle their services and in-flight amenities into different products to meet the needs of their customer segment(s). The cabin mix depends upon the value proposition(s). In this context, the interviewee recommends that long-haul LCCs weigh the economies of scale of a single class cabin against a multiple class cabin (cf. Appendix IX). In case the revenue generated is highest with three classes, such cabin mix is reasonable; otherwise, it causes unnecessary complexity (cf. Appendix IX).

Channels: For communication purposes, I recommend the use of social media channels such as Facebook, Instagram, Twitter and YouTube, since these are channels preferably used by the customer segments defined above. Also, LinkedIn should be used to target business travelers. In this regard, posting frequently is important to build and reach a solid follower base. As for the sale of tickets, long-haul LCCs should focus on reaching their customers directly through own channels (website, customer service hotline, and application). Also, they should make use of travel fare aggregator websites; however, the use of travel agencies is not to be recommended due to high costs caused by global distribution system fees. In this context, a competitive advantage can be achieved by reaching customers outside of established systems. For instance, Ryanair mainly leverages direct online booking and, hence, bypasses travel agencies (cf. Appendix IX).

Customer relationships: Following the example set by both Norwegian and Eurowings, I recommend the use of a frequent flyer program with attractive options to redeem earned points in order to maintain and solidify customer relationships. As for the customer service, long-haul LCCs should make use of both automated (e.g., website, application and chatbot) and personal assistance (e.g., customer service hotline and Facebook Messenger). In this regard, it is of great importance to modernly design the customer service as well as self-service options in order to

leverage cost reduction potentials. For instance, an intelligent chatbot can significantly reduce the number of incoming calls and a comprehensive application can replace an airline's service representatives (cf. Appendix IX).

Revenue streams: To generate revenues, long-haul LCCs should focus on one-time customer payments. In this context, the sale of tickets will be the largest revenue generating source. However, ancillary revenues should not be disregarded (cf. Appendix IX). Additionally, long-haul LCCs that operate Model B may also generate revenues through ongoing payments, specifically, the lease of aircraft.

Cost structure: The business model of long-haul LCCs must be cost-driven, seeking to minimize costs wherever possible. New-generation narrow-body aircraft have the potential to significantly reduce aircraft fuel costs that currently account for a large share of long-haul LCCs' operating costs. Additionally, leveraging direct online booking and, hence, bypassing travel agencies will significantly reduce overhead costs by avoiding high global distribution system fees.

5 Conclusion

5.1 Summary

The emergence of the first long-haul LCCs dates back to the 2000s, with their business model substantially differing from legacy carriers. Yet, recent insolvencies make the business model viability of long-haul LCCs a vividly discussed topic in the aviation industry; existing academic literature is indecisive about their business model viability. A viable business model, in turn, is required to achieve a competitive advantage. The BMC, including its nine building blocks, is a popular tool for conceptualizing an organization. BMI, having gained increasing importance over the last years, is necessary to stand out from competition and can significantly contribute to the improvement of firm performance.

The long-haul low-cost business model initially grew in Asia and then migrated to the West in 2013. Due to the attractive long-haul markets, the business model expanded and experienced a steep increase in available seating capacity, reaching 12.7 million seats offered in 2016. Despite the proven financial success of LCCs on short- and medium-haul markets, most of their attempts have failed on long-haul markets.

Norwegian's and Eurowings' long-haul business models have several similarities and differences. For instance, their operating models differ significantly; while Norwegian operates the long-haul flights itself, Brussels Airlines and SunExpress operate Eurowings' long-haul

flights based on wet lease agreements. As for similarities, both airlines lines target leisure travelers that are price sensitive and insensitive to time constraints as well as business travelers that are sensitive to both time and price.

Norwegian's aggressive expansion, currently operating four times as many long-haul routes as Eurowings, has come at a high cost. Consequently, Norwegian changed parts of its business strategy, scaling back their expansion and introducing a cost reduction program. Nevertheless, Norwegian is likely to need external help to continue its long-haul operations. Eurowings, on the other hand, has also experienced strong growth that the airline was not able to cope with, resulting in a vast number of flight cancellations in 2018. Similarly, compared to Norwegian, Eurowings' setup (i.e., consisting of different brands) confused customers. To return to profitability, Eurowings plans to, for instance, modernize its fleet of aircraft and transfer the commercial responsibility of its long-haul routes to Lufthansa Group.

The business model of long-haul LCCs is principally viable, but both Norwegian and Eurowings show that operating profitably remains difficult, regardless of the operating model and organizational structure. Hence, the business model needs to be innovated to ensure future viability. Having a lean operating model is of crucial importance: either a completely virtual model based on wet lease agreements, or a very simple model with a single type of aircraft. Besides, there is no recommendation to be made concerning the number of long-haul routes; instead, a dense route network and appropriate frequencies are critical. Furthermore, operating a young, fuel-efficient fleet of aircraft that the long-haul LCC does not possess is recommendable. In this regard, new-generation narrow-body aircraft such as the Airbus A321 XLR may open up new potentials for the profitable operation of long-haul routes.

5.2 Limitations

Two limitations need to be considered when reviewing the findings. First, the assessment of the long-haul LCCs' business model viability and the subsequent development of the innovated business model is based upon the case of Norwegian and Eurowings and, hence, cannot be generalized to all long-haul LCCs. Second, the assessment of business model viability is not conducted in-depth since insights into financial data could not be accessed; as the BMCs of the two airlines and the subsequent analysis of findings is based upon journal and newspaper articles as well as publicly available information, a merely general conclusion is drawn.

5.3 Avenues for future research

The findings presented in this thesis build the foundation for further studies. A mixed-methods study taking financial data into account would provide additional insights into the viability of the long-haul LCCs' business model. Besides, as soon as new-generation narrow-body aircraft such as the Airbus A321 XLR operate for long-haul LCCs, their impact on the success of the business model – with a focus on cost advantages over current long-haul aircraft – could be analysed. Furthermore, with the potential of new-generation narrow-body aircraft to target smaller, less competitive airports, a quantitative study focusing on demand analyses to identify target airports would be enlightening for both practitioners and policy makers. In this regard, the potential of feeder services could be considered to determine the need of commercial key partnerships.

IV. Glossary

Air operator certificate	A certificate granted to an aircraft operator that allows the use of aircraft for commercial purposes.
Ancillary revenues	Revenues from ticket-related products and services such as baggage sales.
Base	An airport at which an airline bases both aircraft and crew to operate routes.
Codeshare agreement	A business arrangement under which airlines market the same flight under their own flight code.
Costs per available seat kilometres	The unit cost measure in the airline industry calculated by dividing operating costs by available seat kilometres.
Feeder service	The delivery of passengers from incoming flights to outgoing connection flights.
Frequency	The number of flights offered on a specific route within a determined time period.
Hub airport	An airport that airlines use as a transfer point to get passengers to their intended destination. This type of airport is part of the hub-and-spoke network.
Hub-and-spoke network	The transportation of passengers to the destination airport through a central hub.
Interline agreement	A business arrangement between airlines to handle passengers when their itinerary involves travelling on multiple airlines.

Point-to-point network	The transportation of passengers directly from one destination to another without a layover included.
Wet lease agreement	A leasing agreement under which the lessor provides an aircraft, crew, maintenance and insurance to the lessee.

V. List of appendices

Appendix I: Norwegian's long-haul route network

The flight distances between the origin and destination airports as well as the flight time were calculated with Google Maps.

#	Origin	3 Letter Code	Destination	3 Letter Code	Country of Destination	Flight Distance	Flight Time
1	Oslo	OSL	Fort Lauderdale	FLL	United States	7.585 km	10h 10m
2	Oslo	OSL	New York	JFK	United States	5.950 km	8h 15m
3	Oslo	OSL	Bangkok	BKK	Thailand	8.721 km	10h 50m
4	Oslo	OSL	Krabi	KBV	Thailand	9.129 km	10h 45m
5	Oslo	OSL	Dubai	DXB	United Arab Emirates	5.150 km	6h 45m
6	Oslo	OSL	Lanzarote	ACE	Spain	4.146 km	5h 40m
7	Oslo	OSL	Gran Canaria	LPA	Spain	4.111 km	5h 40m
8	Oslo	OSL	Tenerife	TFS	Spain	4.132 km	5h 55m
9	Oslo	TRF	Gran Canaria	LPA	Spain	4.019 km	5h 55m
10	Stockholm	ARN	Fort Lauderdale	FLL	United States	7.960 km	10h 30m
11	Stockholm	ARN	Bangkok	BKK	Thailand	8.307 km	9h 55m
12	Stockholm	ARN	Krabi	KBV	Thailand	8.744 km	10h 25m
13	Stockholm	ARN	Dubai	DXB	United Arab Emirates	4.796 km	6h 20m
14	Stockholm	ARN	Fuerteventura	FUE	Spain	4.199 km	5h 45m
15	Stockholm	ARN	Gran Canaria	LPA	Spain	4.329 km	5h 50m
16	Stockholm	ARN	Tenerife	TFS	Spain	4.382 km	6h 00m
17	Copenhagen	CPH	Bangkok	BKK	Thailand	8.635 km	10h 05m
18	Copenhagen	CPH	Krabi	KBV	Thailand	9.016 km	10h 40m
19	Copenhagen	CPH	Dubai	DXB	United Arab Emirates	4.792 km	6h 25m
20	London	LGW	Boston	BOS	United States	5.268 km	7h 30m
21	London	LGW	Miami	MIA	United States	7.125 km	9h 45m
22	London	LGW	Orlando	MCO	United States	6.992 km	9h 30m
23	London	LGW	Tampa	TPA	United States	7.101 km	9h 40m
24	London	LGW	Los Angeles	LAX	United States	8.807 km	11h 10m
25	London	LGW	New York	JFK	United States	5.563 km	7h 50m
26	London	LGW	San Francisco	SFO	United States	8.644 km	11h 00m
27	London	LGW	Buenos Aires	EZE	Argentina	11.129 km	13h 45m
28	London	LGW	Rio de Janeiro	GIG	Brazil	9.237 km	11h 50m
29	Paris	CDG	Fort Lauderdale	FLL	United States	7.330 km	10h 00m
30	Paris	CDG	Orlando	MCO	United States	7.235 km	10h 00m
31	Paris	CDG	Los Angeles	LAX	United States	9.094 km	11h 30m
32	Paris	CDG	New York	JFK	United States	5.833 km	8h 25m
33	Paris	CDG	San Francisco	SFO	United States	8.955 km	11h 20m
34	Rome	FCO	New York	JFK	United States	6.884 km	9h 35m
35	Amsterdam	AMS	New York	JFK	United States	5.847 km	8h 15m
36	Barcelona	BCN	Los Angeles	LAX	United States	9.666 km	12h 40m
37	Barcelona	BCN	New York	JFK	United States	6.140 km	8h 55m
38	Barcelona	BCN	San Francisco	SFO	United States	9.579 km	12h 15m
39	Madrid	MAD	New York	JFK	United States	6.109 km	8h 55m
40	Madrid	MAD	Los Angeles	LAX	United States	9.615 km	12h 40m
41	New York	JFK	Oslo	OSL	Norway	5.950 km	7h 00m
42	New York	JFK	Amsterdam	AMS	The Netherlands	5.847 km	6h 55m
43	New York	JFK	Paris	CDG	France	5.833 km	6h 50m
44	New York	JFK	London	LGW	Great Britain	5.563 km	6h 30m
45	New York	JFK	Madrid	MAD	Spain	6.109 km	6h 55m
46	New York	JFK	Rome	FCO	Italy	6.884 km	8h 10m
47	New York	JFK	Barcelona	BCN	Spain	6.140 km	7h 15m
48	Los Angeles	LAX	London	LGW	Great Britain	8.807 km	10h 15m
49	Los Angeles	LAX	Barcelona	BCN	Spain	9.666 km	10h 50m
50	Los Angeles	LAX	Madrid	MAD	Spain	9.615 km	10h 35 m

51	Los Angeles	LAX	Paris	CDG	France	9.094 km	10h 25m
52	Fort Lauderdale	FLL	Oslo	OSL	Norway	7.585 km	8h 35m
53	Fort Lauderdale	FLL	Paris	CDG	France	7.330 km	8h 20m
54	Fort Lauderdale	FLL	Stockholm	ARN	Sweden	7.960 km	8h 55m
55	Tampa	TPA	London	LGW	Great Britain	7.101 km	7h 55m
56	Miami	MIA	London	LGW	Great Britain	7.125 km	8h 05m
57	Orlando	MCO	Paris	CDG	France	7.235 km	8h 10m
58	Orlando	MCO	London	LGW	Great Britain	6.992 km	8h 00m
59	San Francisco	SFO	Barcelona	BCN	Spain	9.579 km	11h 00m
60	San Francisco	SFO	London	LGW	Great Britain	8.644 km	10h 15m
61	San Francisco	SFO	Paris	CDG	France	8.955 km	10h 35m
62	Boston	BOS	London	LGW	Great Britain	5.268 km	6h 15m
63	Buenos Aires	EZE	London	LGW	Great Britain	11.129 km	13h 20m
64	Rio de Janeiro	GIG	London	LGW	Great Britain	9.237 km	11h 10m
65	Bangkok	BKK	Oslo	OSL	Norway	8.721 km	12h 05m
66	Bangkok	BKK	Stockholm	ARN	Sweden	8.307 km	11h 30m
67	Bangkok	BKK	Copenhagen	CPH	Denmark	8.635 km	11h 45m
68	Krabi	KBV	Oslo	OSL	Norway	9.129 km	12h 05m
69	Krabi	KBV	Stockholm	ARN	Sweden	8.744 km	11h 50m
70	Krabi	KBV	Copenhagen	CPH	Denmark	9.016 km	11h 50m
71	Dubai	DXB	Oslo	OSL	Norway	5.150 km	7h 15m
72	Dubai	DXB	Stockholm	ARN	Sweden	4.796 km	6h 45m
73	Dubai	DXB	Copenhagen	CPH	Denmark	4.792 km	7h 00m
74	Helsinki	HEL	Agadir	AGA	Morocco	4.191 km	5h 50m
75	Helsinki	HEL	Gran Canaria	LPA	Spain	4.697 km	6h 25m
76	Helsinki	HEL	Tenerife	TFS	Spain	4.742 km	6h 30m
77	Karlstad	KSD	Gran Canaria	LPA	Spain	4.128 km	5h 40m
78	Oulo	OUL	Gran Canaria	LPA	Spain	4.994 km	6h 40m
79	Oulo	OUL	Tenerife	TFS	Spain	5.028 km	6h 45m
80	Trondheim	TRD	Gran Canaria	LPA	Spain	4.384 km	6h 05m
81	Reykjavik	RKV	Gran Canaria	LPA	Spain	4.053 km	5h 45m
82	Reykjavik	RKV	Tenerife	TFS	Spain	4.026 km	5h 45m
83	Agadir	AGA	Helsinki	HEL	Finland	4.191 km	5h 40m
84	Lanzarote	ACE	Oslo	OSL	Norway	4.146 km	5h 25m
85	Fuerteventura	FUE	Stockholm	ARN	Sweden	4.199 km	5h 45m
86	Gran Canaria	LPA	Helsinki	HEL	Finland	4.697 km	6h 15m
87	Gran Canaria	LPA	Karlstad	KSD	Sweden	4.128 km	5h 30m
88	Gran Canaria	LPA	Oslo	OSL	Norway	4.111 km	5h 30m
89	Gran Canaria	LPA	Oslo	TRF	Norway	4.019 km	5h 30m
90	Gran Canaria	LPA	Oulo	OUL	Norway	4.994 km	6h 30m
91	Gran Canaria	LPA	Trondheim	TRD	Norway	4.384 km	6h 05m
92	Gran Canaria	LPA	Stockholm	ARN	Sweden	4.329 km	5h 55m
93	Gran Canaria	LPA	Reykjavik	RKV	Iceland	4.053 km	5h 35m
94	Tenerife	TFS	Stockholm	ARN	Sweden	4.382 km	5h 50m
95	Tenerife	TFS	Reykjavik	RKV	Iceland	4.026 km	5h 35m
96	Tenerife	TFS	Oslo	OSL	Norway	4.132 km	5h 35m
97	Tenerife	TFS	Oulo	OUL	Norway	5.028 km	6h 45m
98	Tenerife	TFS	Helsinki	HEL	Finland	4.742 km	6h 15m

Source: https://www.norwegian.com/en/route-map/

Appendix II: Norwegian's long-haul products

Compare fare types ×

Compare fares

	Economy cabin Seat pitch: 78 cm (31")			Premium cabin Seat pitch: 109 - 117 cm (43 - 46")	
	Lowfare	Lowfare+	Flex	Premium	PremiumFlex
Hand baggage	Free 1 x 10kg	Free 1 x 10kg	Free 1 x 10kg	Free 1 x 10kg	Free 1 x 15kg
Checked baggage	$	Free 1 x 20kg	Free 2 x 20kg	Free 2 x 20kg	Free 2 x 20kg
Seat reservation	$	Free*	Free	Free	Free
Fast Track	$	$	Free	Free	Free
Meals	$	Free	Free	Free	Free
Lounge	-	-	-	-	Free
Changes	$	$	Free	$	Free
Refundable	-	-	Free	-	Free

Fast Track and Lounge services are available at selected airports. For information regarding our optional services, please see the relevant conditions.

Seat reservation is not included for international long haul flights to/from Barcelona, London and Madrid.

Source: https://www.norwegian.com/uk/booking/booking-information/fare-rules/

Appendix III: Norwegian's ticket prices on selected long-haul routes

The prices listed below represent Norwegian's "Lowfare" product and the other carriers' cheapest fares; accessed on Google Flights (as of December 2, 2019).

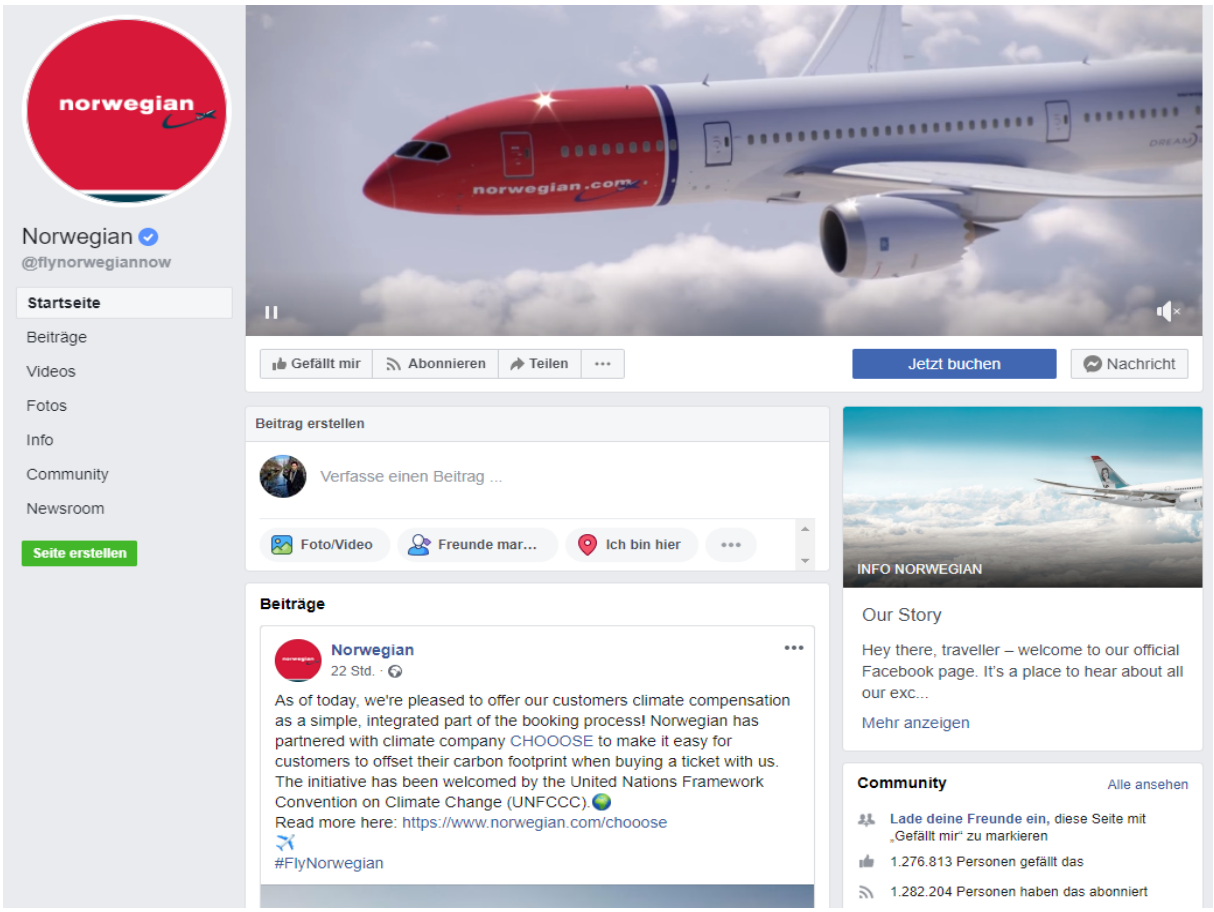
#1: Paris (CDG) - New York (JFK) One-Way (Calendar Week 10)										
Airline	Departure	Mo	Tu	We	Th	Fr	Sa	Su	Avg. Price	Avg. Difference
Norwegian	6.05 pm	140 €	140 €	140 €	n/a	140 €	140 €	n/a	140 €	0%
Air France	7.20 pm	2258 €	2258 €	2258 €	2258 €	2258 €	2258 €	2258 €	2258 €	1513%
Delta	10.30 am	2258 €	2258 €	2258 €	2258 €	2258 €	2258 €	2258 €	2258 €	1513%

#2: Oslo (OSL) - Dubai (DXB) One-Way (Calendar Week 11)										
Airline	Departure	Mo	Tu	We	Th	Fr	Sa	Su	Avg. Price	Avg. Difference
Norwegian	11.00 pm	99 €	n/a	287 €	n/a	248 €	n/a	99 €	183 €	0%
Emirates	2.10 pm	368 €	368 €	368 €	368 €	393 €	393 €	368 €	375 €	105%

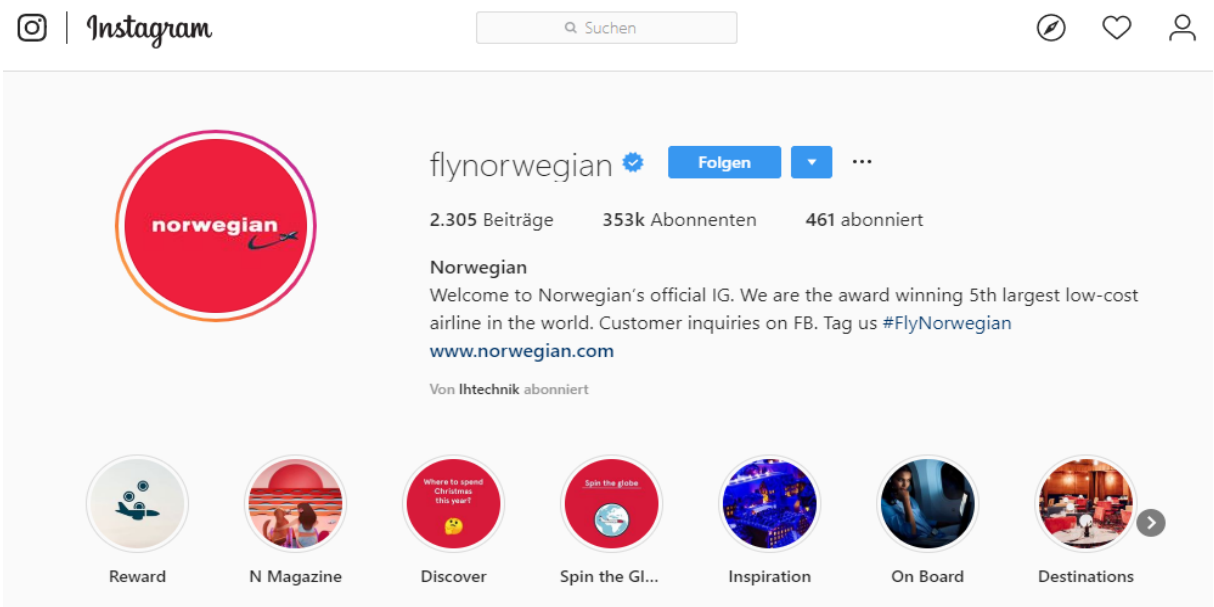
#3: Helsinki (HEL) - Gran Canaria (LPA) One-Way (Calendar Week 12)										
Airline	Departure	Mo	Tu	We	Th	Fr	Sa	Su	Avg. Price	Avg. Difference
Norwegian	10.40 am	120 €	100 €	110 €	90 €	90 €	160 €	90 €	103 €	0%
Finnair	5.20 pm	279 €	279 €	279 €	461 €	461 €	n/a	279 €	340 €	231%

Appendix IV: Norwegian's communication channels

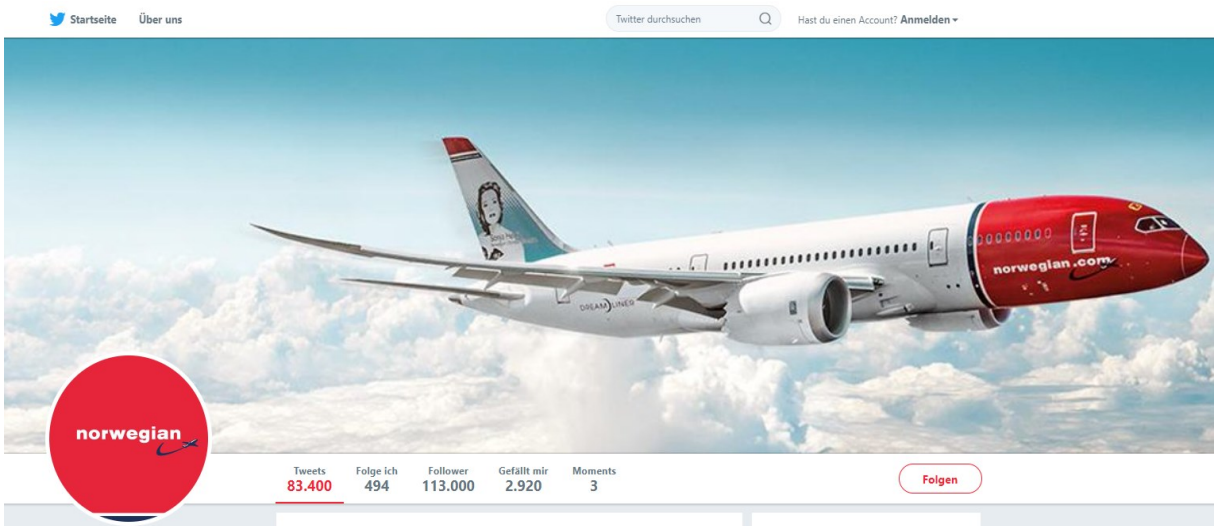
Facebook:



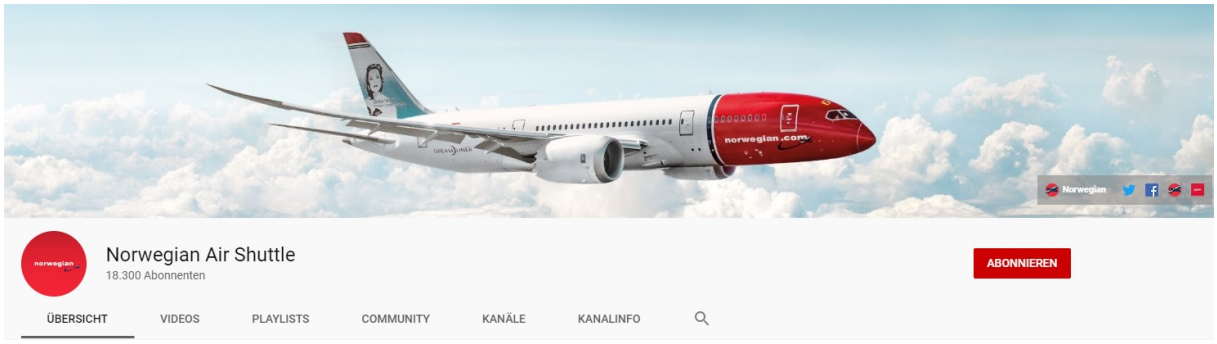
Instagram:



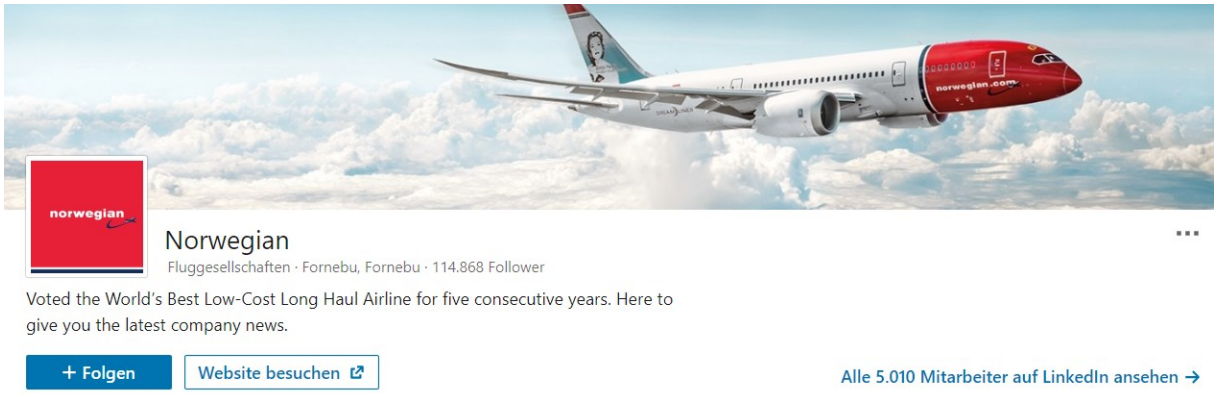
Twitter:



YouTube:



LinkedIn:



Appendix V: Eurowings' long-haul route network

The flight distances between the origin and destination airports as well as the flight time were calculated with Google Maps.

#	Origin	3 Letter Code	Destination	3 Letter Code	Country of Destination	Flight Distance	Flight Time
1	Dusseldorf	DUS	New York	EWR	United States	6.038 km	9h 05m
2	Dusseldorf	DUS	Fort Myers	RSW	United States	7.644 km	10h 40m
3	Dusseldorf	DUS	Miami	MIA	United States	7.607 km	10h 25m
4	Dusseldorf	DUS	Varadero	VRA	Cuba	7.909 km	10h 55m
5	Dusseldorf	DUS	Havana	HAV	Cuba	7.970 km	11h 10m
6	Dusseldorf	DUS	Punta Cana	PUJ	Dominican Republic	7.381 km	10h 05m
7	Frankfurt	FRA	Las Vegas	LAS	United States	8.964 km	12h 00m
8	Frankfurt	FRA	Barbados	BGI	Barbados	7.338 km	10h 00m
9	Frankfurt	FRA	Windhoek	WDH	Namibia	8.108 km	10h 20m
10	Frankfurt	FRA	Mauritius	MRU	Mauritius	9.177 km	11h 30m
11	Munich	MUC	Bangkok	BKK	Thailand	8.800 km	10h 30m
12	Munich	MUC	Las Vegas	LAS	United States	9.260 km	13h 15m
13	New York	EWR	Dusseldorf	DUS	Germany	6.038 km	7h 15m
14	Fort Myers	RSW	Dusseldorf	DUS	Germany	7.644 km	9h 05m
15	Miami	MIA	Dusseldorf	DUS	Germany	7.607 km	9h 10m
16	Varadero	VRA	Dusseldorf	DUS	Germany	7.909 km	9h 20m
17	Havana	HAV	Dusseldorf	DUS	Germany	7.970 km	9h 40m
18	Punta Cana	PUJ	Dusseldorf	DUS	Germany	7.381 km	9h 05m
19	Las Vegas	LAS	Frankfurt	FRA	Germany	8.964 km	11h 10m
20	Barbados	BGI	Frankfurt	FRA	Germany	7.338 km	9h 20m
21	Windhoek	WDH	Frankfurt	FRA	Germany	8.108 km	10h 20m
22	Mauritius	MRU	Frankfurt	FRA	Germany	9.177 km	12h 05m
23	Bangkok	BKK	Munich	MUC	Germany	8.800 km	11h 55m
24	Las Vegas	LAS	Munich	MUC	Germany	9.260 km	12h 35m

Source: https://www.eurowings.com/en/discover/destinations/destinations.html

Appendix VI: Eurowings' long-haul products

Our fares at a glance

Short and medium-haul route	Long-haul route			
	BASIC Our budget fare	**SMART** Our standard fare	**BEST** Our comfort fare	**BIZclass** Our premium fare
Collect miles - Boomerang Club or Miles & More	✓	✓	✓	✓ including HON Circle miles
Water free of charge	✓	✓	✓	✓
Catering	Surcharge	✓ SMART-Meals (a warm and a cold meal) incl. drink	✓ BEST-Meals incl. drinks	✓ Exquisite menus at an excellent service
Sky-Meals	**Sky Meal can be added for a surcharge** if booked online	**Sky Meal can be added for a surcharge** if booked online	**Sky Meal can be added for a surcharge** if booked online	–
1 bag up to 23 kg	**€50** if booked online	✓	✓	see baggage up to 32 kg
2nd bag up to 23 kg	**€90** if booked online	**€90** if booked online[10]	✓	see baggage up to 32 kg
1 bag up to 32 kg	–	–	–	✓

2nd bag up to 32 kg	—	—	—	✓
Hand luggage up to 8kg	✓ Taking your hand luggage into the cabin not guaranteed	✓	✓ 2 items of hand luggage	✓ 2 items of hand luggage
Preferred seating	€20	✓	✓	✓
Seat	Standard seat	Standard seat[11]	Comfort seat with more legroom and generously adjustable backrest	Premium lie-flat seat in exclusive area
More legroom and a comfortably adjustable backrest included	€ 90 depending on availability	€ 50 depending on availability[11]	✓	✓ Two-metre-long bed with a horizontal lying surface
Lounge access	—	✓ [3]	✓ [3]	Lounge access at selected airports
Reserved hand luggage compartment	—	—	✓	✓
Priority check-in	✓ [4]	✓ [4]	✓	✓
Priority boarding	✓ [5]	✓ [5]	✓	✓
Access to security fast lane	✓ [5]	✓ [5]	✓ [5]	✓ at select airports

Booking changes	**Surcharge**	**Free with Flex option[1]**	**Free with Flex option[1]**	**Free with Flex option[1]**
Cancellation	—	**Free with Flex option[1]**	**Free with Flex option[1]**	**Free with Flex option[1]**
Extras Special luggage and sport equipment	**Surcharge[2]** (price depends on service)	**Surcharge[2]** (price depends on service)	**Surcharge[2]** (price depends on service)	**Surcharge[2]** (price depends on service)
Ski equipment	✓ depending on availability[8]	✓ depending on availability[8]	✓ depending on availability[8]	✓ depending on availability[8]
In-flight entertainment Wings Entertainment	✓	✓	✓	✓
WiFi on board Wings Connect	**Surcharge[2]** (price depends on service, payment on board)	**Surcharge[2]** (price depends on service, payment on board)	**Surcharge[2]** (price depends on service, payment on board)	**Surcharge[2]** (price depends on service, payment on board)

Source: https://www.eurowings.com/en/information/our-fares.html

Appendix VII: Eurowings' ticket prices on selected long-haul routes

The prices listed below represent Eurowings' "BASIC fare" product and the other carrier's cheapest fare; accessed on Google Flights (as of December 10, 2019).

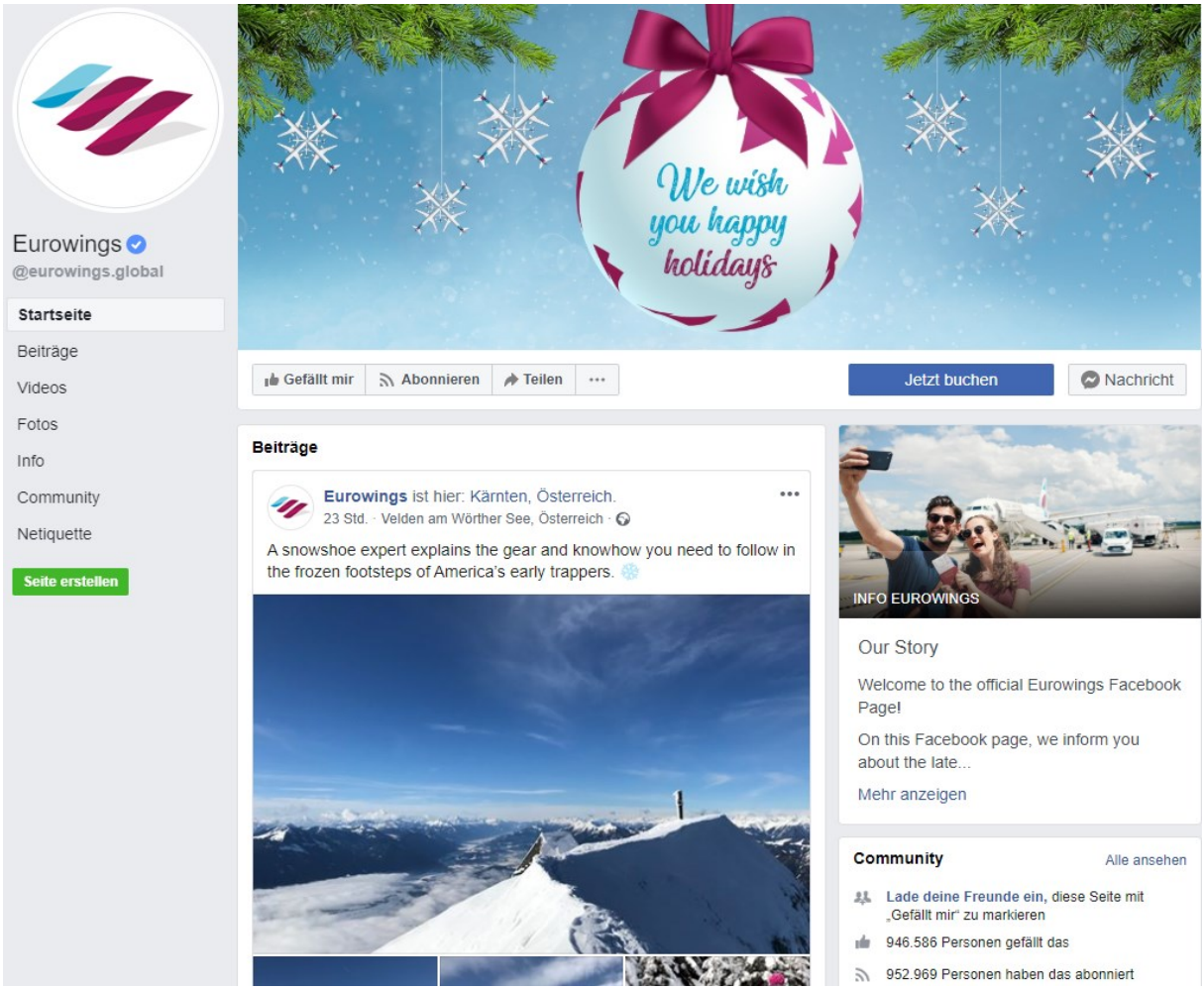
#1: Frankfurt (FRA) - Windhoek (WDH) One-Way (Calendar Week 10)										
Airline	Departure	Mo	Tu	We	Th	Fr	Sa	Su	Avg. Price	Avg. Difference
Eurowings	8.00 pm	n/a	415 €	n/a	415 €	n/a	415 €	n/a	415 €	0%
Air Namibia	7.10 pm	506 €	771 €	532 €	506 €	597 €	597 €	1051 €	651 €	57%

#2: Dusseldorf (DUS) - New York (EWR) One-Way (Calendar Week 11)										
Airline	Departure	Mo	Tu	We	Th	Fr	Sa	Su	Avg. Price	Avg. Difference
Eurowings	11.45 am	190 €	n/a	210 €	250 €	210 €	250 €	210 €	220 €	0%
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

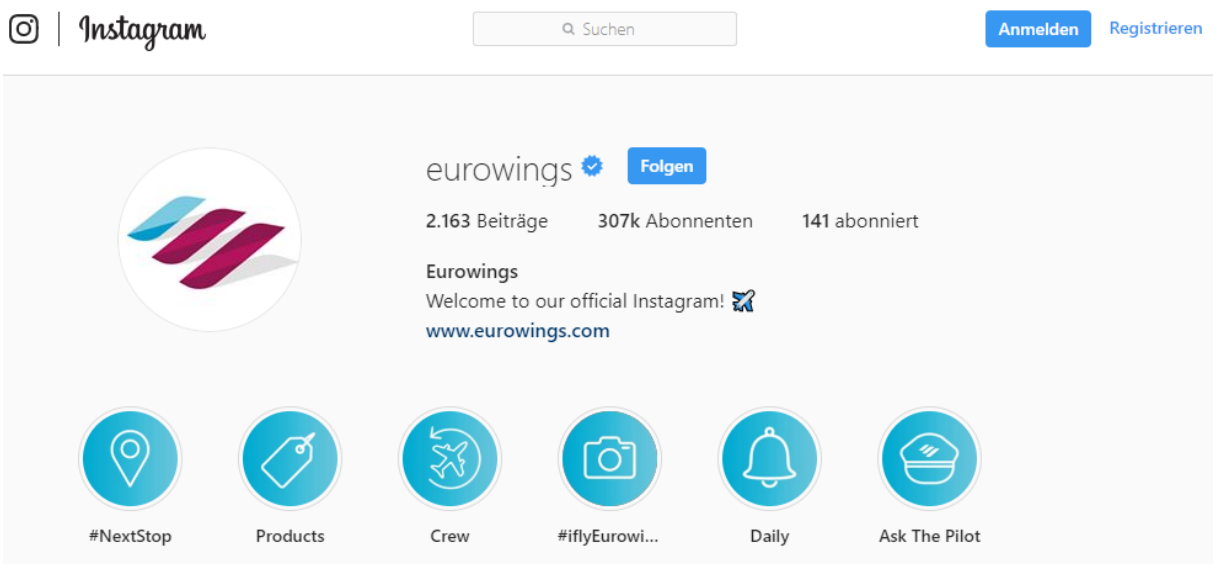
#3: Dusseldorf (DUS) - Havana (HAV) One-Way (March 2020; only one flight peer wek)								
Airline	Departure	CW 10	CW 11	CW 12	CW 13	CW 14	Avg. Price	Avg. Difference
Eurowings	11.50 am	350 €	310 €	310 €	310 €	350 €	326 €	0%
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Appendix VIII: Eurowings' communication channels

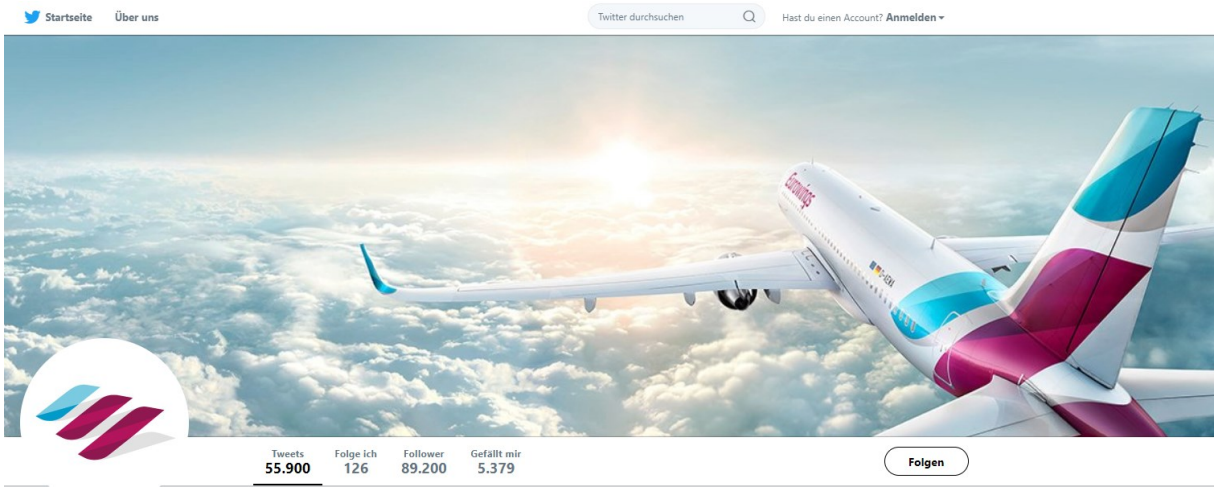
Facebook:



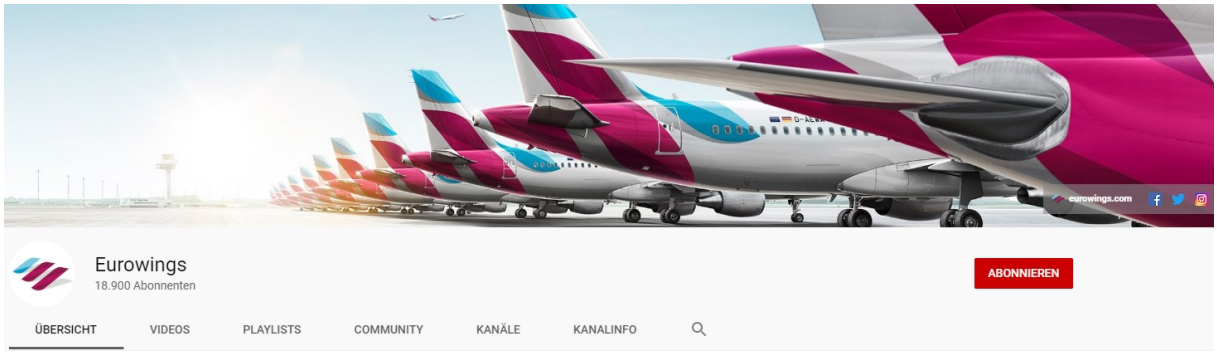
Instagram:



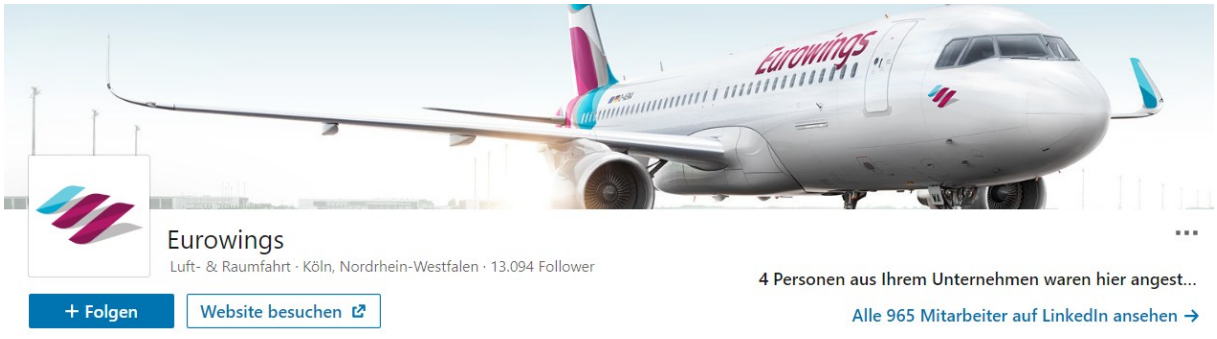
Twitter:



YouTube:



LinkedIn:



Appendix IX: Assessment of Norwegian's and Eurowings' long-haul business model and requirements for an innovated long-haul low-cost business model

Expert interview conducted with Lars Wendel (Consultant at Lufthansa Consulting) on 18.12.2019.

1) Sind grundsätzliche Schwachstellen im BMC von Norwegian und Eurowings erkennbar? Wenn ja, welche?

Norwegian:

- Fakt, dass Langstrecke eine ganz andere Komplexität als Kurzstrecke aufweist, wurde von Beginn an unterschätzt
  → Unklar, ob dies im Geschäftsmodell begründet oder der Marktdynamik geschuldet ist
- Marke ist evtl. nicht die richtige als pan-europäische
- Lukrative Business und First-Class Passagiere haben Loyalität
  → Netzwerkeffekt, den Miles & More oder Allianz-Mitgliedschaft bietet, hat Norwegian mit Norwegian Reward nicht

Eurowings:

- Die Marke
  → In der Kundenwahrnehmung extrem schwierig / Kunden verwirrt: ist die EW ein point-to-point carrier; ein low-cost carrier, der EasyJet und Ryanair die Stirn bietet; ein Feeder für die Lufthansa Drehkreuze; eine touristische Langstreckenfluggesellschaft?
- Schlechte Kundenwahrnehmung / Geringe Kundenzufriedenheit durch sehr hohe Komplexität
  → Bspw. nimmt Passagier LH Marke bei der Buchung des Fluges und beim Check-In wahr; Passagier steigt in EW Flieger und nimm Sun Express Crew wahr
  ➔ Extrem schwierig, eine Customer Experience zu kreieren
- Konzernzugehörigkeit beschneidet EW maßgeblich
  → Bspw. durch A++: Auflage, dass man keine sehr günstigen Tickets, die unter die Partnerschaft fallen, anbieten darf
  ➔ Überfrachtung des Low-Costers mit Komplexität der Konzernzugehörigkeit
- Veraltete und unharmonische Flotte

2) Sind grundsätzliche Stärken im BMC von Norwegian und Eurowings erkennbar? Wenn ja, welche?

Norwegian:

- Einheitliche Marke, die komplett unter dem Dach von Norwegian operiert
- Gute und schlanke Struktur zum Betreiben der Langstrecke durch ein einziges AOC
- Reduzierte Komplexität (zwei Flugzeugtypen von Boeing)
  → Hilfreich, um Kosten im Griff zu halten
- Höhere Flexibilität, da keine Konzernzugehörigkeit
- Key Partnerships: Integration auf beiden Seiten des Atlantiks

Eurowings:

- Konzernzugehörigkeit: Einbettung in den Vertrieb des Konzerns

3) Ist das Geschäftsmodell von Long-Haul LCCs funktionsfähig?

- Grundsätzlich funktionsfähig, aber beide zeigen, dass es nicht einfach ist
- A321 XLR bringt neue Möglichkeit

4) Was bedarf es für die Funktionsfähigkeit des Geschäftsmodells von Long-Haul LCCs?

- Key Partnerships spielen eine extrem wichtige Rolle
  → Norwegian hat gute Balance mit Connecting Partners auf beiden Seiten des Atlantiks
- Einbettung in eine starke Vertriebsorganisation oder starke Partner finden, die Vertrieb ermöglichen
- Erfolgsmodell ist Flotte: A321 XLR bringt neue Möglichkeiten
- Klare Value Proposition für die relevanten Kundensegmente
  → Welcher Wert wird auf der Langstrecke geboten? Ist das ausschlaggebend gegenüber bspw. der LH, was sie in der Eco bieten?
  → Wenn man seine Zielgruppe genau kennt, erreicht man seine Kunden
  ➔ Jedoch extrem schwierig für LCC auf Langstrecke (außer günstigen Preis)
- Frequenzen sehr wichtig
  → Frequenz 1/7 vorwiegend für klassische Backpacker
- Bsp. Level: interessante Ausprägung, da 100% virtuell, aber auch nur funktionsfähig aufgrund Konzernzugehörigkeit
- (Extrem) Schlankes Operating Model: entweder komplett virtuell und Wet Leasing, oder extrem einfach (ein Flugzeugtyp; aber auch schwierig, da nicht jedes Flugzeugtyp zu jedem Markt passt)
- Anzahl an Routen nicht ausschlaggebend
  → Netzwerk: Breite / Dichte des Netzes sowie Intensität (Frequenzen) wichtig; ansonsten Customer Acquisition Costs extrem hoch
  → auch abhängig von Customer Segment: low-cost Geschäftsreisende (nach NY zu fliegen) versus breiter gefasste Customer Segments

- Travel Agencies verursachen hohe Kosten durch GDS Gebühren und sollten somit als Distribution Channel vermieden werden
  → Wettbewerbsvorteil durch einfaches Erreichen von Kunden außerhalb etablierter Systeme (bspw. online, vgl. Ryanair)
- Modernes Aufsetzen von Customer Service und Self-Service Level
  → Kostenreduktion
- Cabin Mix: Abwägen Skaleneffekt eines ein-klassigen Produkts vs. differenziertes Produkt
  → Abhängig von Value Proposition (für wen soll Value geboten werden?); wird mit drei Klassen mehr Yield generiert, macht dies Sinn; wenn nicht, verursacht dies unnötig Komplexität
- Sales-Aktivitäten und Network Management sind ebenfalls wichtiger Bestandteil des Geschäftsmodells (Key Activities)
- Ancillaries nicht zu vernachlässigen
- Best Case: junge Flotte, die nicht im eigenen Besitz ist

Zusätzliches:

- Weiterer Channel EW: Charter / Touristic sales
  → Reiseveranstalter können entweder ein komplettes Flugzeug chartern oder bei dynamischer Paketierung automatisch den Einzelplatzvertrieb einbauen
  ➔ Tour Operators sind damit ebenfalls ein Customer Segment
- Eurowings hat zu Beginn vergebens versucht, dass sich externe Airlines über das „Plug and Play“ Prinzip ihnen anschließt
  ➔ Keine Airlines waren an einem Anschluss interessiert

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